

Appendix 7A-1: Comprehensive Everglades Restoration Plan Annual Report – 470 Report

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SUMMARY

The Comprehensive Everglades Restoration Plan (CERP) Annual Report is required to provide oversight and accountability for financial commitments under the Everglades restoration section and to record progress in CERP implementation in accordance with Section 373.470(7), Florida Statutes (F.S.), as amended during calendar year 2005. The South Florida Water Management District (SFWMD or District), in cooperation with the Florida Department of Environmental Protection, which conserves and manages Florida's natural resources and enforces the state's environmental laws, prepares the CERP Annual Report. This report is included as Chapter 7A of this volume, as required by Section 373.036(7), F.S.

This report includes information on the Conservation and Recreation Lands Trust Fund, the Land Acquisition Trust Fund, the Preservation 2000 Trust Fund, the Florida Forever Trust Fund, the Save Our Everglades Trust Fund and other named funds or accounts for the acquisition or construction of project components, features, or facilities that benefit CERP. This report also identifies state and local sponsor revenues and itemizes expenditures related to CERP implementation. It describes the purpose for which the funds were expended, provides the unencumbered fund balance remaining for implementation of CERP, and provides a schedule of anticipated expenditures for the next fiscal year. This document fulfills the statutory requirements and includes CERP financial information and the progress of CERP implementation information for Fiscal Year 2006 (FY2006) (October 1, 2005–September 30, 2006). ***[Note: This information will be provided in Part (A) and Part (B) in the final report after the District and the FDEP fiscal year.]***

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CERP 470 REPORT

On May 10, 2005, both the Florida State Legislature enacted and the Governor of Florida approved Chapter 2005-36, Laws of Florida, an act relating to water management district planning and reporting, which amended Section 373.036, F.S. This act took effect July 1, 2005, and amended Section 15, Subsection (7) of Section 373.470, F.S., as follows:

373.470 Everglades restoration.—

(7) ANNUAL REPORT.—To provide enhanced oversight of and accountability for the financial commitments established under this section and the progress made in the implementation of the comprehensive plan, the following information must be prepared annually as part of the consolidated annual report required by s. 373.036(7):

(a) The district, in cooperation with the department, shall provide the following information as it relates to implementation of the comprehensive plan:

1. An identification of funds, by source and amount, received by the state and by each local sponsor during the fiscal year.
2. An itemization of expenditures, by source and amount, made by the state and by each local sponsor during the fiscal year.
3. A description of the purpose for which the funds were expended.
4. The unencumbered balance of funds remaining in trust funds or other accounts designated for implementation of the comprehensive plan.
5. A schedule of anticipated expenditures for the next fiscal year.

(b) The department shall prepare a detailed report on all funds expended by the state and credited toward the state's share of funding for implementation of the comprehensive plan. The report shall include:

1. A description of all expenditures, by source and amount, from the Conservation and Recreation Lands Trust Fund, the Land Acquisition Trust Fund, the Preservation 2000 Trust Fund, the Florida Forever Trust Fund, the Save Our Everglades Trust Fund, and other named funds or accounts for the acquisition or construction of project components or other features or facilities that benefit the comprehensive plan.
2. A description of the purposes for which the funds were expended.
3. The unencumbered fiscal-year-end balance that remains in each trust fund or account identified in subparagraph 1.

(c) The district, in cooperation with the department, shall provide a detailed report on progress made in the implementation of the comprehensive plan, including the status of all project components initiated after the effective date of this act or the date of the last report prepared under this subsection, whichever is later. The information required in paragraphs (a), (b), and (c) shall be provided as part of the consolidated annual report required by s. 373.036(7) annually in a single report to the Governor, the President of the Senate, and the Speaker of the House of Representatives, and copies of the report must be made available to the public. The initial report is due by November 30, 2000, and each annual report thereafter is due by March 1.

Section 373.470(7), F.S., requires the District and the FDEP to submit a CERP Annual Report to “provide enhanced oversight of and accountability for the financial commitments established under this section (Everglades restoration) and the progress made in the implementation of the comprehensive plan.” The statute also requires that this report be made available to the public, and this mandate is fulfilled by producing the CERP Annual Report (also known as the CERP 470 Report) and including it in the *2007 South Florida Environmental Report – Volume I* (2007 SFER – Volume I).

The CERP Annual Report is divided into three parts, based on the portion of the statute that each fulfills:

- In Part (A), the District and FDEP jointly identify funding sources and amounts, itemize FY2006 expenditures and fund balances, and provide a schedule of anticipated expenditures for FY2007. ***[Note: This will be provided in the final report, after the fiscal year.]***
- In Part (B), the FDEP provides a detailed report on all funds appropriated and expended by the state on current projects related to CERP. Final credit toward the non-federal share of funding will be determined in each Project Cooperative Agreement. ***[Note: This will be provided in the final report, after the fiscal year.]***
- In Part (C), the District and FDEP provide a detailed report on progress made in the implementation of CERP, including the status of all projects initiated after the effective date of the Everglades Restoration Investment Act (Section 373.470, F.S.). ***[Note: This will be updated in the final report.]***

This report has been consolidated with other annual reports in the 2007 SFER – Volume I, pursuant to Chapter No. 2004-53, Laws of Florida, which was passed by the Florida Legislature in 2005.

PART (A) FUNDS – SFWMD AND FDEP

BACKGROUND

Pursuant to Section 373.470(7)(a), F.S., Part (A) of the CERP Annual Report contains information on revenues, expenditures, fund balance, and anticipated expenditures related to CERP implementation. FY2006 information is presented as follows: Revenues (**Table 1**), Expenditures (**Table 2**), Unencumbered Balance of Funds remaining in trust funds or other accounts (**Table 3**), and Anticipated Expenditures for the next fiscal year (**Table 4**) **[Note: Tables 1 through 4 will be included in the final report.]** Only revenues, expenditures, and unencumbered balances dedicated to CERP are included in this chapter. The financial information contained in this annual report is taken from unaudited FY2006 records. Audited FY2006 information is scheduled to be available during the second quarter of FY2007. Any changes to the financial information presented here will be reflected in the District's Comprehensive Annual Financial Report as well as in future CERP annual reports. No federal revenues or expenditures are shown in these schedules.

The District is funding its share of CERP with revenues from several sources. *Ad valorem* taxes and state appropriations comprise the largest portion of these revenues. Other sources include, but are not limited to, investment earnings on available cash balances, contributions from local governments, mitigation revenues, Florida Forever Program funds, and Preservation 2000 Trust funds and grants.

BASIS OF PRESENTATION

Accounting principles, policies, and practices of both the District and the FDEP conform to generally accepted accounting principles for state and local governments, and are structured in accordance with the Government Accounting Standards Board requirements. These principles require the use of fund accounting. A fund is a separate fiscal and accounting entity having a self-balancing set of accounts. Fund accounting is designed to segregate transactions related to certain functions or activities to ensure resources are applied to finance the activities and objectives for which the resources are received, and to show compliance with legal and contractual obligations.

Part (A) Funds

to be included here in the final report

470 PART (B) FUNDS – FDEP

BACKGROUND

Pursuant to Section 373.470(7)(b), F.S., Part (B) of the CERP Annual Report provides a detailed account of all funds expended by the state of Florida toward land acquisition for CERP in FY2006. *[Note: This will be presented in a table after the end of the District's fiscal year in October 2006. The unencumbered fiscal-year-end balance that remains in each identified trust fund also will be reported here. Only revenues, expenditures, and unencumbered balances dedicated to CERP will be included within this document.]*

Every CERP project will be described in a Project Implementation Report (PIR), and a Project Cooperation Agreement subsequently will be executed. The amount of expenditures to be credited toward the state of Florida's share of funding for implementation of CERP will be developed during the detailed design phase and affirmed in the Project Cooperation Agreements.

BASIS OF PRESENTATION

The FDEP's accounting policies conform to generally accepted accounting principles for state and local governmental units and are structured in accordance with the Government Accounting Standards Board requirements. These principles require the use of fund accounting. A fund is a separate fiscal and accounting entity having a self-balancing set of accounts. Fund accounting is designed to segregate transactions related to certain functions or activities to ensure resources are applied to finance the activities and objectives for which the resources are received and to demonstrate compliance with legal and contractual obligations.

The information in these special-purpose financial presentations relates to the general fund and to special revenue funds classified as a governmental fund type. Special revenue funds are used to account for specific revenue sources that are legally restricted to expenditure for specified purposes.

***Part (B) Funds
to be included here in the final report***

PART (C) – IMPLEMENTATION STATUS

THE CERP PROCESS

Comprehensive Plan Overview

The overarching purpose of CERP is to restore, protect, and preserve the South Florida ecosystem while providing for other water-related needs of the region. Four interrelated factors essential to the restoration effort are the quantity, quality, timing, and distribution of water. To restore the timing and distribution of water, the available quantity of water first must be increased. Moreover, to prevent further damage to the system and to allow restoration, the quality of the water must be improved where necessary prior to its distribution.

Because CERP projects are interrelated, many can perform optimally only after other projects are implemented. Projects to store water and improve water quality require determining the feasibility of using new technologies, defining the optimum timing and distribution of water, and developing supporting programs. Lands necessary for the projects must be acquired, and detailed designs must be produced. Further, a process must be in place to monitor CERP's progress and success and to modify the plan when warranted.

CERP will investigate several technologies to accomplish the alterations necessary to restore South Florida's ecosystem. Pilot projects will determine the feasibility of using each of these technologies, some of which, such as Aquifer Storage and Recovery (ASR) and seepage control, while currently in use in Florida, have never been implemented on the scale envisioned in CERP.

The optimum timing and distribution of water within the natural Everglades ecosystem must be refined. By reviewing historical data, a picture has been developed regarding how the natural system behaved prior to human intervention; however, detailed information is lacking for many areas. In some cases, it is neither practical nor possible to restore the system to its historical condition. Also, existing animal and plant populations have adapted in some degree to the altered ecosystem and must be monitored closely to ensure that the restoration effort does not cause long-term negative impacts to the populations.

Given the scale and complexity of CERP, the effects of its implementation on ecosystem restoration may not be apparent for many years. A number of projects must be implemented before the hydrologic improvements necessary for ecosystem restoration can begin. The timing and distribution of water by the Central and Southern Florida (C&SF) Project can be altered only after water storage capacity has been increased, along with any necessary water quality improvements. As each of the components to improve the timing and distribution of water are completed, it is expected that the ecosystem will begin to recover.

Design Agreements

Three Design Agreements have been executed to implement CERP and are described below. Unless otherwise noted, this CERP Annual Report refers to the Design Agreement between the District and the U.S. Army Corps of Engineers (USACE) for those projects for which the District is the local sponsor.

- **USACE and District.** A Design Agreement for design of elements of CERP and the South Florida Ecosystem Restoration Project was executed on May 12, 2000, and covers activities related to planning, engineering, and design of CERP implementation. A copy of this Design Agreement is posted at http://www.evergladesplan.org/pm/pm_docs/desagree_ped_design_agreement_051200.pdf.

- **USACE and Palm Beach County.** The second Design Agreement, covering engineering and design for the Winsberg Farm Wetland Restoration Project, was executed on January 3, 2002. To view a copy of this Agreement, see http://www.evergladesplan.org/pm/pm_docs/des_agree_winsberg.pdf.
- **USACE and Lee County.** The third Design Agreement, covering engineering and design for the Lakes Park Restoration Project, was executed on January 17, 2003. A copy of this Design Agreement is available at http://www.evergladesplan.org/pm/pm_docs/des_agree_lee.pdf.

Design Agreements for other CERP projects are pending with the FDEP, Miami-Dade County, and the Miccosukee Tribe of Indians of Florida. Further information on the Design Agreements is available at http://www.evergladesplan.org/pm/progr_part.cfm.

Program Management Process Overview

Given the number of projects included in CERP, as well as the many related projects that affect the systemwide restoration effort, intense and innovative management, communication and coordination are required throughout the implementation of the plan. Discussion of the CERP program elements are provided in this section. Greater detail will be found on the official CERP web site and in the final 2007 SFER–Volume II companion CD-ROM Consolidated Project Report Database (Appendix 1-3).

CERP Master Program Management Plan

The purpose of the Master Program Management Plan (MPMP), which was finalized in August 2000, is to describe the framework and process to be used by the USACE and the District for managing and monitoring implementation of the CERP. This document provides the USACE and the District with a common understanding of the business processes and protocols to be applied during implementation of the CERP. The MPMP can be viewed at http://www.evergladesplan.org/pm/program_docs/mpmp.cfm.

CERP Program Level Management Activities

Programs and processes are in place to support restoration efforts in areas including controlling the budget, managing data, conducting land surveys, collecting data, communicating with the public and stakeholders, ensuring environmental equity, enhancing recreation, monitoring progress, and updating the CERP when necessary. An overview of the major program management functions follows. Web links for each of these functions are shown in **Table 5**.

Table 5. Web links to program-level activities.

Program-Level Activity	Official Link
Adaptive Assessment	http://www.evergladesplan.org/pm/recover/recover_map.cfm
Design Coordination Team	http://www.evergladesplan.org/pm/dct.cfm
Environmental and Economic Equity	http://www.evergladesplan.org/pm/progr_eee.cfm
Geodetic Vertical Controls	http://www.evergladesplan.org/pm/progr_geodetic.cfm
Independent Scientific Review	http://www.evergladesplan.org/pm/ind_review.cfm
Information and Data Management	http://www.evergladesplan.org/pm/progr_data_mgmt.cfm
Interagency Modeling Center	http://www.evergladesplan.org/pm/recover/system_wide_modeling.cfm
Land Acquisition	http://www.evergladesplan.org/pm/land_acquisition/re_projects.cfm
Master Recreation Plan	http://www.evergladesplan.org/pm/progr_master_rec_plan.cfm
Public Outreach	http://www.evergladesplan.org/pm/progr_outreach.cfm
Program Controls	http://www.evergladesplan.org/pm/progr_controls.cfm
Programmatic Regulations	http://www.evergladesplan.org/pm/progr_regs.cfm
RECOVER	http://www.evergladesplan.org/pm/recover/recover.cfm

Program Management Plans

Program Management Plans, akin to Project Management Plans (PMPs), which are discussed later, are in place for seven Program Elements. A list of these completed Program Management Plans, some of which are being updated, is provided in **Table 6**. For more detail on completed plans, see http://www.evergladesplan.org/pm/program_docs/mgmtplns.cfm.

Table 6. Completed Program Management Plans.

Program Management Plan	Completed
Environmental and Economic Equity	September 2001
Geodetic Vertical Control Surveys	February 2001
Information and Data Management	September 2003
Interagency Modeling Center	January 2004
Program Controls	December 2000
Public Outreach	August 2001
RECOVER	August 2004

Discussion and Status of Program Element Activities

Adaptive Assessment

Refer to the RECOVER portion of this section for information on Adaptive Assessment.

Design Coordination Team

The Design Coordination Team (DCT) provides consistent and effective communication, coordination and issue resolution on projects. DCT membership is composed of District, USACE, and FDEP staff from various disciplines including project management and program controls; planning, engineering, design, and construction management; real estate; research and monitoring; operations and maintenance; environmental compliance; regulation and permitting; and others.

The DCT provides consistent and effective communication, coordination, and issue resolution on projects included in the Design Agreement (http://www.evergladesplan.org/pm/program_docs/progr_part_design_agree.cfm), and technical and managerial oversight on issues related to design including schedules and budgets; construction plans and specifications; and updates of the Master Program Management Plan. The DCT reviews plans and work products including PMPs, PIRs, and Pilot Project Design Reports (PPDRs). Further, the DCT considers real property requirements; contract scopes of work; program and project cost projections; and Restoration Coordination and Verification (RECOVER) efforts. The performance of operation, maintenance, repair, replacement and rehabilitation also is directed by the DCT, along with development of program-level procurement strategies. For more information on the DCT, see www.evergladesplan.org/pm/dct.cfm.

Environmental and Economic Equity

As CERP is implemented, citizen concerns, needs, and economics are considered and integrated into the project-specific and restoration-related processes and decisions. Environmental and Economic Equity (EEE) deals with social, cultural, behavioral, historical and economic subjects to maximize the potential benefits, both systemwide and project-specific, resulting from CERP activities, and to minimize adverse social or economic impacts. Efforts to ensure that CERP implementation is open to all audiences include town hall meetings, one-on-one sessions, and public meetings in minority communities. Presentations are given in economically disadvantaged communities, and many meetings are conducted in Spanish or Creole to reach Hispanic and Haitian residents.

U.S. Environmental Protection Agency (USEPA) training and standards for population census analysis form the basis for each project's EEE success. The District and the USACE have developed custom maps that interpret 2000 census data to show the locations of low income and minority communities. These highly acclaimed maps are posted on the CERP web site to help project managers and teams to see where projects and populations of concern intersect. To view baseline data acquisition and analysis maps, see http://www.evergladesplan.org/pm/progr_eee.cfm. In FY2006, the Urban Corridor Analysis and Economic Justice Maps will be completed, and the EEE Program Management Plan will be revised.

As required by the Water Resources Development Act of 2000 (WRDA 2000), Section 601(k), programs at the federal and state levels ensure that small and minority-owned businesses are aware of and provided with opportunities to participate in CERP contracting under Section 15(g) of the Small Business Act. An array of outreach programs and products are in place, and efforts are made to hold public meetings and workshops in locations readily accessible to low-income and minority populations and in communities adjacent to CERP projects. Translators are provided for some meetings to assure inclusion of those with limited English proficiency. CERP

will have a direct impact on regional economies through the creation of jobs and contracting opportunities. Established programs ensure that small and minority-owned businesses are aware of these opportunities. The District's Small Business Enterprise Rule became effective in August 2006, and more than 100 applications for certification have been received as of the writing of this report.

Geodetic Vertical Controls

The purpose of the Geodetic Vertical Control Survey Project is to provide a common vertical elevation framework for scientific data analysis, modeling, design, construction, and operations and maintenance. All spatial data collections for CERP are based on this survey, and all project elements with an elevation component are referenced to the new monuments, which were set during this project to ensure systems connectivity. The project was completed under budget and ahead of schedule in November 2003. The web link http://www.evergladesplan.org/pm/progr_geodetic.cfm includes links to the National Spatial Reference System and to the CERP Survey Monuments application.

Independent Scientific Review Panel

The Independent Scientific Review Panel, convened by the National Academy of Sciences as required by WRDA 2000, reviews CERP's progress toward achieving the natural system restoration goals of the plan and produces a biennial report to Congress that includes an assessment of the ecological indicators and other measures of progress in restoring the ecology of the natural system. During the FY2006, the panel met in October and December 2005 and in February 2006 to discuss the draft report, its conclusion and recommendations. The panel was established to review CERP's progress toward achieving natural system restoration goals. The web link http://www.evergladesplan.org/pm/ind_review.cfm includes National Academy of Sciences documents related to the panel. For more information on the panel and its first report, which will be published in late 2006, see <http://www8.nationalacademies.org/cp/projectview.aspx?key=WSTB-U-03-04-A>.

CERP Information and Data Management

The purpose of CERP Information and Data Management is to provide coordinated management and integration of all CERP information through a program-level strategy. The strategy evolves with CERP's information requirements and includes oversight of the CERPZone and Electronic Document Management. The CERP Data Management Plan is under revision for FY2007 to include new technology areas. The project management system was moved from the CERPZone into the District's environment. Revision of the Information and Data Program Management Plan is scheduled to be completed in the Fourth Quarter FY2006.

Systemwide Modeling – Interagency Modeling Center

System modeling in support of CERP projects incorporates a range of activities, including use of systemwide model results by RECOVER teams to evaluate the systemwide performance of CERP projects. Likewise, PDTs can review model results for plan alternatives.

In 1998, a precursory analysis of the impact of the expected global rise in sea level on the ability to meet regional water management objectives was conducted with the application of the South Florida Water Management Model (SFWMM). The SFWMM was designed to simulate the hydrology and management of the water resources system from Lake Okeechobee to Florida Bay. Even the current rates of sea level would present formidable challenges for regional water management in southeastern Florida in the next few decades. Analyses indicate that without significant infrastructure changes, southeastern coastal Florida is likely to see an increase in both flood potential and the need for reduced water use.

Because past models reveal that sea level rise does not appear to significantly impact the hydroperiod of the inland Everglades, the Interagency Modeling Center (IMC) will perform regional model runs during FY2007 to support analysis of sea level rise sensitivity. In July 2006, an independent peer review was performed on the Everglades Landscape Model (ELM). ELM was designed to predict landscape response and water quality changes resulting from water management scenarios. The Lake Okeechobee Water Quality Model, which became available in June 2003, simulates the eutrophication process in water column and underlying sediments in Lake Okeechobee to produce estimates of total phosphorus.

In FY2006, the Regional (SFWMM) Model documentation peer review was completed. The Final Draft of the IMC Business Plan was also completed and presented to the IMC Board.

Land Acquisition

The District is responsible for acquiring the real estate needed for the construction, monitoring, and operation of CERP projects. The CERP projects were estimated, in October 1999 dollars, to cost \$7.8 billion, of which \$2.2 billion was allocated to the acquisition of lands. The District prioritizes the purchase of lands based on authorized project construction schedules, availability of willing sellers, identification of lands threatened by development potential, and recognition of lands in areas of rapidly escalating property values. Properties acquired are managed until the land is needed for construction of CERP projects. When historical uses of properties are allowed to continue through reservations or leases, lessees typically are responsible for managing the property. Information on CERP land acquisition activities annually is presented in the Florida Forever Work Plan in the 2007 SFER – Volume II (Chapter 6).

Master Recreation Plan

The Master Recreation Plan will identify, evaluate, and address the impacts of CERP implementation on existing recreational use within the South Florida ecosystem, and will identify and evaluate potential new recreation, public use, and public educational opportunities. Promising opportunities may be recommended for further evaluation during development of PIRs, for implementation through other cost-share arrangements, or for stand-alone Congressional authorizations.

The USACE and the District have begun hosting a series of meetings throughout the CERP region to present an overview of the Everglades Master Recreation Plan. The first two meetings were held during July and August 2006 in the West Palm Beach area, with additional meetings planned in the Everglades area of Palm Beach County, and in Broward, Miami-Dade, Monroe, Martin, Collier, and Lee counties. During these meetings, maps showing project locations and potential for various forms of recreation are on display, and the public is asked to comment on future recreation needs, trends, existing conditions, and emerging issues. Information provided by the public will be used to help develop the Master Recreation Plan, which in turn will guide recreational uses and facilities on CERP project lands that are compatible with restoration and project goals.

GIS maps will be completed during FY2006. A Master Recreation Plan Program Analysis Report for CERP and Acceler8 is underway, to be completed during the coming fiscal year.

Public Information and Outreach

Outreach efforts include the CERP Report, which highlights community outreach initiatives, and Community Outreach in Action, which targets minority communities. A media event, held in FY2005 to raise public awareness and forge business partnerships to support Acceler8 construction and restoration activities, garnered an Award of Excellence in 2006 from the National Association of Government Communicators (NAGC). (See information on the NAGC's Blue Pencil/Gold Screen Awards at <http://www.nagc.com/awards/>.)

Everglades video news clips were produced and aired weekly on various evening news stations to highlight restoration benefits. A job training and workforce development program was launched during FY2005 and graduated its first students in FY2006. An array of media is used for CERP public outreach efforts in South Florida. Environmental education has been promoted in educational supplements including “The Everglades: An American Treasure,” and a more comprehensive booklet and poster, “The Journey of Wayne Drop to the Everglades” (available to educators at <http://www.evergladesplan.org/education/learning.cfm>).

FY2006 accomplishments include implementing community partnerships for CERP and Acceler8, and completing the first year of a job training and workforce development program, which was launched during FY2005.

Program Controls

To ensure successful implementation of the CERP by keeping it on schedule and within budget, a set of program controls is being implemented. These controls, critical for a program with the scope and magnitude of CERP, consist of management of records, finances, and schedules. The management task also requires strict adherence to protocols for cost estimating and forecasting, budget development and financial reporting.

The plan presented to Congress in 1999 included a baseline cost estimate for projects, including pilot projects and feasibility studies, of \$7.8 billion at October 1999 price levels. The plan also included a baseline cost estimate for Adaptive Assessment and Monitoring of \$387 million. These estimates did not include costs for program coordination required by the WRDA 2000 or Programmatic Regulations. The current cost estimate for the plan, as shown in the CERP 2005 Report to the U.S. Congress, is \$10.5 billion at October 2004 price levels. A detailed discussion is found in the CERP 2005 Report to Congress, available at http://www.evergladesplan.org/pm/program_docs/cerp_report_congress_2005.cfm.

Cost increases include price level (inflation) adjustments, scope changes based on final decision documents with USACE Chief’s Reports, and scope changes for additional program coordination requirements such as those arising from WRDA 2000. Federal expenditures through the end of FY2004 are found in the report to the U.S. Congress. The CERP Annual Report’s Parts (A) and (B) contain only state of Florida and District revenue, expenditure, and fund balance information.

The original implementation schedule for CERP that is described in Section 10 of the 1999 C&SF Project Comprehensive Review Study was based on the knowledge, experience, and requirements known at that time. An update to the Implementation Schedule was completed in July 2001 and is referred to as Master Implementation Schedule 1.0 (see <http://www.evergladesplan.org/pm/misp.cfm>). The Master Implementation Sequencing Plan (MISP) now defines the order in which the many projects within the South Florida Ecosystem Restoration Program will be planned, designed and constructed. The MISP addresses sequencing and scheduling of all of the CERP projects, including pilot projects and operational elements, based on the best scientific, technical, funding, contracting, and other information available.

Programmatic Regulations

The CERP Programmatic Regulations (Pro Regs), which were issued during FY2004 pursuant to WRDA 2000, Section 601(h), require the development of six program-wide Guidance Memoranda and a Pre-CERP Baseline. The Guidance Memoranda and Pre-CERP Baseline provide direction for using the tools for planning, implementation, and evaluation, and provide assurances that the goals and purposes of the plan will be achieved. As part of the consultation process required by the Pro Regs, these draft documents containing the six Guidance Memoranda and the Pre-CERP Baseline were made available for review by agencies and the public. The USACE and the District consulted with the South Florida Ecosystem Restoration Task Force in

completing the Guidance Memoranda and Pre-CERP Baseline, and in FY2005 submitted them to the U.S. Secretary of the Army in accordance with the programmatic regulations. The web page http://www.evergladesplan.org/pm/progr_regs.cfm provides information on the Pro Regs, including Guidance Memoranda, the Pre-CERP Baseline, and the MISP.

The System Operating Manual, which provides an integrated, systemwide framework for operating the implemented projects of CERP and the C&SF Project, was drafted in December 2005 in consultation with the U.S. Department of the Interior (USDOI), USEPA, Seminole Tribe of Florida, Miccosukee Tribe of Indians of Florida, FDEP, and other agencies. The manual is posted at http://www.evergladesplan.org/pm/progr_regs_syst_oper_manual.cfm.

RECOVER

RECOVER published a set of regional conceptual ecological models in December 2005; the models are used in developing performance measures and restoration targets. In March 2006, the CERP Systemwide Performance Measures Document was updated. This living document, which is updated as changes to performance measures and documentation are approved by RECOVER's Evaluation and Assessment Teams, is available online at <http://www.evergladesplan.org/pm/recover/recover.cfm>. The CERP Adaptive Management Strategy was completed in April 2006, and can be found in Appendix 7B-1 of the 2007 SFER – Volume I. The strategy document explains the importance of adaptive management to CERP. In April, RECOVER's Assessment released for review its final draft of the 2006 Assessment Strategy for the Monitoring and Assessment Plan. The Adaptive Management Recommendation for Decompartmentalization also was completed during FY2006.

Evaluation of the hydrologic model results from the Initial CERP Update in October 2005 indicated that the performance of the Initial CERP Update Model, known as CERP A, differed from the performance of the original CERP model, known as D13R. Recommendations include updates to improve modeled performance of CERP A through operational optimization and some modifications to include those projects that have Tentatively Selected Plans. The initiative for the CERP A Refinement began in January 2006, and is expected to be completed in the autumn of this year.

The Performance Measure Documentation Report was completed during FY2006. The schedules for the ASR Contingency Plan and for the Sea Level Rise Sensitivity Analysis will be re-baselined from FY2006 to FY2007 and FY2008. A Reservoir Optimization Study will begin in the Fourth Quarter of FY2006, and ASR Reservoir Contingency planning will begin shortly thereafter. Additional information on RECOVER is presented in Chapter 7B of this volume.

Key Programmatic Deliverables

CERP 2005 Report to Congress

The CERP 2005 Report to Congress is the first in a series of periodic reports fulfilling requirements of the WRDA 2000. This report provides members of Congress and other interested parties with an update on the progress of CERP over the first five-year period of its implementation.

The report summarizes the progress made to date and the accomplishments expected over the next five years. Expenditures for the first five years are included, along with forecasts for funding requirements for the next five years. Additional information on the CERP 2005 Report to Congress can be found online at http://www.evergladesplan.org/pm/program_docs/cerp_report_congress_2005.cfm.

The CERP 2005 Report to Congress (Updated March 2006) is currently undergoing Administration review. After Administration comments, if any, have been received and addressed, the Secretaries of Army and Interior will jointly submit the final report to Congress.

Master Implementation Sequencing Plan

Purpose

The purpose of the Master Implementation Sequencing Plan (MISP), which was updated in April 2005, is to define the order in which the many projects within the South Florida Ecosystem Restoration Program will be planned, designed and constructed.

The MISP was developed by the USACE and the District, in consultation with the USDOJ, the USEPA, the U.S. Department of Commerce, the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the FDEP, and other federal, state, and local agencies.

Background

As required by the Pro Regs, the MISP includes the sequencing and scheduling of all of the projects of the CERP, including pilot projects and operational elements, based on the best scientific, technical, funding, contracting and other information available.

The original implementation schedule for CERP is described in Section 10 of the C&SF Project Comprehensive Review Study. The schedule and sequence included in the CERP was based on the knowledge, experience and requirements known at that time. The most recent update to the Implementation Schedule was completed in July 2001 and is referred to as Master Implementation Schedule 1.0.

The context in which CERP Implementation is occurring has shifted since the previous implementation schedule update. New legislation and updated policy have altered how projects are planned and implemented, creating even more of a need to review and update how the CERP projects are sequenced and packaged. The following is a list of some of the major changes affecting CERP implementation:

- Passage of the WRDA 2000
- Promulgation of the Pro Regs required by WRDA 2000
- Water reservations and savings clause (elimination or transfer and flood protection) provisions:
 - Detailed analyses required in PIRs
 - Formulation analyses and justification is more detailed than originally envisioned and may also require additional project dependencies
- Increased complexity of the project implementation process
- Updated schedules for PIRs that are underway
- Extensive agency and public involvement

Banding

The purpose of banding is to focus the implementing agencies' limited resources on the products that can be accomplished and generate the expected benefits within a specified timeframe. The projects are grouped in five-year "bands." These five-year bands coincide with incremental model runs (i.e., Band 1 = 2005–2009, Band 2 = 2010–2014, etc.).

Banding allows for focused resource and agency expertise. A focused and refined approach is necessary to successfully implement this program. Concentration of efforts to the successful

design and implementation of fundamental projects will provide the necessary framework for continued restoration efforts.

MISP Development Process

The Programmatic Regulations require the development of the MISP. A two-phased approach was used to develop the MISP. Phase 1 consisted of the development of a Technical Constraints Analysis, which included an analysis of component packaging, identification of benefits, project sequencing, and task duration. The outputs of the Technical Constraints Analysis were then evaluated further by resource leveling.

Modeling of the Phase 1 effort at five-year increments was originally envisioned for the Phase 2 effort; however, these simulations are not available. Once the simulations become available, the MISP team will coordinate with RECOVER to conduct an appropriate review of the MISP in five-year increments and review its relationship with Interim Goals and Interim Targets. The bands show when construction of a CERP component or feature has been completed and that the PIR and design phases would have been completed.

Phase 2 then consisted of presenting the output of Phase 1 for public and stakeholder review and comment as well as taking into account factors that will affect the sequencing, such as the state's Acceler8 initiative. The bands provide clear priorities and allow focusing of resource and agency expertise. The MISP 1.0 product can be viewed online at http://www.evergladesplan.org/pm/pm_docs/misp/040605_misp_report_1.0.pdf.

Overview of Project Processes

Project-level activities conducted under the Design Agreement include planning, engineering, design, and project management efforts specific to individual projects. A PMP is developed, which provides a detailed description of each project's scope, activities, tasks, schedule, cost estimates and agency responsibilities. PMPs are also developed for Studies, as they establish the project scope, schedule, costs, funding and technical performance requirements for each CERP project. The Project and Study Management Plans can be viewed online at http://www.evergladesplan.org/pm/program_docs/mgmtplns.cfm. A list of completed PMPs is provided in **Table 7**.

Table 7. Completed Project Management Plans.

Project Management Plan	Completed
Acme Basin B	October 2003
Aquifer Storage and Recovery (ASR) Regional Study	August 2003
Biscayne Bay Coastal Wetlands	August 2002
Broward Water Preserve Areas	May 2004
C-111 Spreader Canal	March 2002
Caloosahatchee River (C-43) Basin ASR Pilot	January 2002
C-43 Basin Storage Reservoir – Part 1	February 2002
Comprehensive Integrated Water Quality Feasibility Study	August 2003
Everglades Agricultural Area Storage Reservoirs – Phase 1	January 2002
Everglades National Park Seepage Management	October 2005
Florida Keys Tidal Restoration	April 2002
Florida Bay/Florida Keys Feasibility Study	February 2002
Hillsboro ASR Pilot	March 2001
Indian River Lagoon (IRL) – North	April 2003
IRL – South	July 2004
L-31N (L-30) Seepage Management Pilot	May 2006
Lake Belt In-Ground Reservoir Technology Pilot	April 2002
Lake Okeechobee ASR Pilot	March 2001
Lake Okeechobee Watershed	December 2003
Lakes Park Restoration	July 2005
North Palm Beach County – Part 1	June 2005
Site 1 Impoundment	November 2003
Southwest Florida Feasibility Study	January 2002
Picayune Strand (Southern Golden Gate Estates) Hydrologic Restoration	March 2001
Strazzulla Wetlands	December 2003
WCA-3 Decomp and Sheetflow Enhancement – Part 1	March 2002
Wastewater Reuse Technology Pilot	December 2003
Winsberg Farm Wetland Restoration	May 2004

Once a PMP has been approved, a PIR is developed to conduct additional project formulation and evaluation and to provide more detailed engineering and design. During this process, structural and non-structural alternatives are evaluated for economic, environmental, and engineering effectiveness. Criteria for site suitability are established, and a siting analysis is conducted. An Environmental Impact Statement (EIS) may be prepared as part of the National Environmental Policy Act (NEPA) process, or an Environmental Assessment (EA) may be completed. The completed PIR then serves as the authorization document for the project.

More than 20 PIRs have been initiated. These documents present the alternative designs evaluated in developing the project plan to be recommended for construction authorization to Congress. Completed PIRs are listed in **Table 8**.

Table 8. Completed Project Implementation Report, Environmental Impact Statement, and Environmental Assessment documents.

PIRs, EIS, and EA Documents	Completed
Draft Everglades Agricultural Area Reservoirs PIR/EIS	February 2002
Final Indian River Lagoon – South PIR/EIS	March 2004
Final Picayune Strand Hydrologic Restoration PIR/EIS	November 2004
Revised Draft Site 1 Impoundment (Fran Reich Preserve) PIR/EA	December 2005

When necessary, a Design Documentation Report (DDR) is produced to provide the technical basis for a project's plans and specifications, and to serve as a summary of engineering and design decisions made during project development and implementation. The DDR covers the time period from preconstruction engineering through project completion. Plans and specifications are then prepared for construction of the project. The status of CERP project implementation is discussed later in this chapter. Pilot projects, feasibility studies, critical restoration projects, and other CERP efforts also are addressed.

Public Meetings to Monitor Ecosystem Restoration Progress

Beginning in October 2005, meetings of the South Florida Ecosystem Restoration Task Force's (Task Force) Working Group (Working Group) replaced CERP Regional Project Delivery Team Meetings as the forum for agency interaction and public participation in CERP projects and related ecosystem restoration efforts. In June 2006, new guidance for consultation and coordination with the Working Group and Task Force was drafted. Some key points from the June draft guidance follow.

The Working Group provides the forum and opportunity for federal, state, and local agencies to participate in development, review, discussion, and recommendation on issues associated with each Everglades restoration project. These meetings also provide stakeholders and the public an opportunity to review progress and decisions, and to provide input through a public comment period. The Working Group is consulted formally during the NEPA Scoping Process and during development of alternatives in the Plan Formulation and Evaluation Stage of each project. Consultation on the draft PIR is with the Task Force, although the Working Group is briefed on the project in advance of the Task Force meeting. Consultations with Native American tribes are held separately and independent of the Task Force and Working Group briefings.

Project Delivery Teams (PDTs) established for each project include staff from the USACE and the District that have expertise in planning, engineering, and other relevant technical areas. All PDT meetings are posted on the CERP calendar and have conference call-in lines available. The public may call in to these meetings or attend in person, and will have the opportunity to make comments that will be recorded for noted for consideration. The CERP calendar at <http://www.evergladesplan.org/news/calendar.cfm> provides related links, including the Task Force calendar. The role of the PDT includes ensuring consistency of approaches employed for the project, soliciting and processing feedback, leading the oversight of contractor activities to produce products, and ensuring high quality products are delivered on schedule.

The District's Water Resources Advisory Committee (WRAC) serves as an advisory body to both the Task Force and the District's Governing Board. All items for CERP are presented to the WRAC prior to seeking consultation with the Task Force. More detail on the Task Force and upcoming Working Group meetings are posted at <http://www.sfrestore.org>. Task Force and Working Group meetings are held throughout the CERP region, and agendas are published two

weeks prior to each meeting. For information about upcoming meetings and workshops, see http://www.sfrestore.org/wg/wg_meetings.html.

Achievement of WRDA Requirements

All WRDA 2000 requirements directed by the U.S. Congress to be completed in the initial five-year period of CERP implementation have been completed. The required accomplishments, which are detailed in the Five Year Report to Congress, include the following:

- **Executed President/Governor's Agreement.** On January 9, 2002, President Bush and Governor Bush executed the *Comprehensive Everglades Restoration Plan Assurance of Project Benefits Agreement* as required by §601(h)(1)(A) of WRDA 2000.
- **Executed Governor/Secretary of Army Agreement.** In 2002, the Governor and the Secretary of the Army executed an agreement for resolving disputes between the USACE and the state associated with implementation of the plan as required by §601(i)(1) of WRDA 2000.
- **Promulgated CERP Programmatic Regulations.** Promulgated the Programmatic Regulations for the Comprehensive Everglades Restoration Plan: Final Rule in 2003 by the Department of the Army, with the concurrence of the Governor of Florida and the Secretary of the Interior to ensure that the goals and purposes of the plan are achieved as required by §601(h)(3) of WRDA 2000.
- **Established Independent Scientific Review Panel.** Established in 2004, an independent scientific review panel, the Committee on Independent Scientific Review of Everglades Restoration Progress, convened by the National Academy of Sciences to review the plan's progress toward achieving the natural system goals of the plan as required by §601(j)(1) of WRDA 2000.
- **Transmitted Miami-Dade ASR Report.** In 2003, transmitted the report for Miami-Dade ASR as required by §601 of WRDA 2000.
- **Developed Outreach Programs.** Outreach programs have been developed to reach a variety of audiences, including individuals with limited English proficiency, and socially and economically disadvantaged communities. Small and minority-owned businesses are provided opportunities to participate in CERP contracting opportunities. Outreach and assistance activities were commenced as required by §601(k) of WRDA 2000.
- **Finalized Master Implementation Sequencing Plan.** The MISP (Version 1.0) was finalized in March 2005. This document describes the current sequencing and scheduling for the projects included in the plan, and lists and groups individual projects in the five-year period in which construction is to be completed.
- **Promulgated Program-Wide Guidance Memoranda.** Six Draft Program-Wide Guidance Memoranda promulgated in 2005 provide guidance on the general format and content of PIRs; formulation and evaluation of alternatives developed for PIRs; general content of operating manuals; general direction for the assessment activities of RECOVER; instructions for identifying in PIRs the appropriate quantity, timing, and distribution of water to be dedicated and managed for the natural system; and instructions for identifying in PIRs whether an elimination or transfer of existing legal sources of water will occur as a result of implementation of the plan.
- **Completed Pre-CERP Baseline.** A Pre-CERP Baseline Draft was completed; this is one of the tools to be used in determining whether existing legal sources of water will

be eliminated or transferred because of CERP implementation and whether levels of service for flood protection will be reduced.

- **Completed Interim Goals Agreement.** An Interim Goals Agreement Draft was completed and will be used to evaluate the restoration success of the plan throughout the implementation process.
- **Complete Interim Targets.** The Interim Targets Draft was completed and will be used to evaluate the success of the plan in providing for other water-related needs of the region, including water supply and flood protection throughout the implementation process.

CERP PROJECT MANAGEMENT

Overview of CERP Projects

Through WRDA 2000, the U.S. Congress authorized an initial \$1.4 billion package of projects to begin CERP implementation. The initial authorization included four pilot projects, plus two pilots authorized in WRDA 1999, ten specific project features, and a programmatic authority through which smaller projects can be more quickly implemented. Over the next five years, subject to issuance of Section 404 permits, construction will be completed through the District's Acceler8 efforts for all or portions of seven of these ten projects:

- C-44 Basin Storage Reservoir (IRL – South)
- Everglades Agricultural Area (EAA) Storage Reservoirs – Part 1, Phase 1
- Site 1 Impoundment
- WCA-3A/3B Levee Seepage Management
- C-11 Impoundment and Stormwater Treatment Area
- C-9 Impoundment and Stormwater Treatment Area
- C-111 Spreader Canal

These projects will provide about 261,400 acre-feet (ac-ft) of water storage; 4,000 acres of Stormwater Treatment Areas (STAs); restoration of freshwater wetlands, tidal wetlands, and nearshore habitat; and restoration of the quantity, quality, timing, and distribution of freshwater to the estuarine systems such as Barnes Sound and Manatee Bay, while providing public access and recreational opportunities.

Additional projects in CERP to be completed in the next five-year period as part of Acceler8 and other state initiatives are all or a portion of the following projects recommended in the plan but not yet authorized by Congress:

- C-43 West Reservoir
- Biscayne Bay Coastal Wetlands – Phase 1
- Picayune Strand Restoration
- Acme Basin B Discharge
- C-51 and L-8 Basin Reservoir – Phase 1

These projects will provide significant increases in water storage; restoration of the quantity, quality, timing, and distribution of freshwater to Biscayne Bay and Biscayne National Park; restoration and enhancement of wetlands by reducing over-drainage while restoring natural and beneficial sheetflow; increased spatial extent of wetlands; improved quality and volume of water delivered to coastal estuaries; and public access and recreational opportunities.

CERP projects and feasibility studies scheduled for completion by the USACE and local sponsors in the next five-year period include the following:

- Lakes Park Restoration
- Winsberg Farms Wetland Restoration, Phase 2
- ASR Pilot Projects (installations to be completed, testing to continue)
- L-31 Seepage Management Pilot
- Lake Istokpoga Regulation Schedule
- Rotenberger Wildlife Management Area Operation Plan
- Florida Bay/Florida Keys Feasibility Study
- Comprehensive Integrated Water Quality Feasibility Study

Prior to full-scale implementation, six pilot projects, costing about \$97 million, were planned to address uncertainties with some of CERP's features. These projects include an ASR in each geographic region that the technology is proposed, in-ground reservoir technology in the lake belt region of Miami-Dade County, levee seepage management technology adjacent to ENP, and advanced wastewater treatment technology to determine the feasibility of using reuse water for ecological restoration.

The ten projects and the adaptive assessment program, totaling \$1.1 billion recommended in the initial authorization were selected because they could provide systemwide water quality and flow distribution benefits to the ecosystem, as well as opportunities to integrate these features with other ongoing federal and state restoration programs. The MISP, which groups items by construction completion date, facilitates the understanding of the current overall implementation strategy by presenting the information in the sequence it will be worked on by the implementing agencies. Bands are management tools that provide clear priorities and allow focusing of resource and agency expertise. The Band 1 projects and components, along with their MISP construction completion dates (2005–2010), are shown in **Table 9**.

Table 9. MISP construction completion dates – Band 1 projects.

Project or Component Name	Completion Date
Caloosahatchee (C-43) River ASR Pilot	2006
Hillsboro ASR Pilot Project	2006
Melaleuca Eradication and Other Exotic Plants (PIR)	2007
Winsberg Farm Wetlands Restoration	2008
L-30 (formerly L-31 N) Seepage Management Pilot	2008
Lake Okeechobee ASR Pilot	2007
Biscayne Bay Coastal Wetlands (Phase 1)	2008
Picayune Strand Hydrologic Restoration	2009
Indian River Lagoon – South	
- C-44 Reservoir	2009
- Natural Areas Real Estate Acquisition (Phase 1)	2009
Broward County Water Preserve Area	
- C-9 Impoundment	2009
- C-11 Impoundment	2009
- WCA-3A/3B Levee Seepage Management	2008
Acme Basin B	2007
Site 1 Impoundment	2009
North Palm Beach County – Part 1	
- C-51 and L-8 Basin Reservoir, Phase 1 (Palm Beach Aggregates)	2008
EAA Storage Reservoir	
- Part 1, Phase 1	2009
Lake Okeechobee Watershed	
- Lake Istokpoga Regulation Schedule	2008
Modify Rotenberger Wildlife Management Area Operation Plan	2009
Lakes Park Restoration	2009
C-43 Basin Storage Reservoir	2010

Subsequent pages in this chapter describe the individual projects and milestones, such as development of PMPs and PIRs, and are organized by category as Acceler8 projects, pilot projects, feasibility studies, critical projects, and other CERP projects.

Improved water quality and increased storage are critical to Everglades restoration. During FY2004, years ahead of schedule, the District moved forward with three reservoir projects to complete a major part of CERP. In a shift from “business as usual,” in which work would wait until the studies were completed, the District started project design while the USACE continued with planning and environmental studies. Early in FY2005, the state of Florida and the District

unveiled the Acceler8 initiative, designed expressly to advance CERP and other restoration projects. The District and the USACE also have continued detailed planning and preliminary design of pilot projects, feasibility studies, and other capital or construction projects, as well as implementing critical restoration projects that commenced prior to CERP authorization.

Acceler8

Overview

The Acceler8 initiative began in October 2004 to expedite specific Everglades restoration projects, which range in construction value from \$14 million to \$480 million. Several of the projects include multiple components for a total of 18 independent projects. This initiative will expend more than \$1.5 billion in additional state funds above the \$200 million annually planned for CERP. The goal of Acceler8 is to complete the design and construction of the identified projects by 2011. Through close coordination with federal agencies, the District will design and construct projects that are consistent with CERP recommended plans and will be proposed to Congress for crediting authorization.

The design phase is complete for four Acceler8 projects, and they are currently under construction. These projects are on schedule and are approximately 28 percent complete. To guide final design, minimize risk and cost, and maximize efficiency for the reservoir and impoundment projects, three sets of test cells are included as part of the Acceler8 initiative. Construction and testing of test cells at the EAA, C-44, and C-43 reservoir sites are complete. Monitoring and testing will be complete in mid-2007.

Construction of the initial phase of the EAA Compartment B STA Cell 4 project is complete. The remainder of STA Cell 4 and three other projects are under construction: EAA Compartment C STA-6 Section 2, Compartment C STA-5 Flow-way 3, and Compartment C C-139 Annex Pump Station. These projects and components are reported under the District's Everglades Water Quality Program (Chapters 3A and 5 of this volume).

Design of the remaining Acceler8 projects is on-going, with overall progress estimated at approximately 32 percent complete. Some projects will be constructed in phases with scheduled start dates from July through September. Permits have been received for all current construction. Permit applications have been submitted for upcoming construction and are in the review and approval stage.

The Acceler8 initiative is a major boost for Everglades restoration, which reaffirms the commitment of the federal, state, and local partnership to revitalize the ecosystem by stepping up the pace on eight restoration projects. These projects, some with multiple components, will provide immediate environmental, flood control, and water supply benefits when completed. They will serve as the foundation for other comprehensive restoration efforts to follow and include the following:

- C-43 (Caloosahatchee River) West Reservoir
- C-44 (St. Lucie Canal) Reservoir/STA
- EAA Reservoir – Phase 1 with Bolles and Cross Canals Improvements
- EAA STAs Expansion
- Water Preserve Areas (WPAs) (includes Site 1, C-9, C-11, Acme Basin B, WCA-3A/3B)
- Picayune Strand (Southern Golden Gate Estates) Restoration
- Biscayne Bay Coastal Wetlands – Phase 1
- C-111 Spreader Canal

In addition to environmental improvements, these Acceler8 projects will maintain existing levels of flood control and water supply options, along with the potential for recreational opportunities. The District and the USACE will continue their partnership in implementing CERP. Acceler8 projects will continue in a dual-track mode with the USACE and the District continuing in the planning phases for these and all CERP projects, while the District proceeds with the detailed design and construction of the Acceler8 projects. Additional information on these projects can be found on the Acceler8 web site at www.evergladesnow.org.

Discussion and Status of Acceler8 Projects

Acceler8 C-44 (St. Lucie Canal) Reservoir/STA

This project will capture local runoff from the C-44 basin, treat some or all of it via sedimentation and natural transformation of nutrients, and return it to the C-44 Canal when there is a need. This project will benefit flow attenuation to the St. Lucie Estuary (SLE). Improved water quality benefits will be realized from reduced loading of nutrients, pesticides, herbicides, and other pollutants contained in runoff presently discharged to the estuary. This project, which also has water supply benefits, is located in southern Martin County, directly north of the C-44 Canal, halfway between Lake Okeechobee and the Atlantic Ocean. All advance planning and field work is complete. Preliminary design began in March. Construction of test cells, which will provide data for the final project design, was completed in June 2006.

Acceler8 C-43 (Caloosahatchee River) West Reservoir

This project will capture and store regulatory releases from Lake Okeechobee, reducing the number and volume of harmful discharges to coastal estuaries. This project will capture and store stormwater runoff from the C-43 basin, decreasing or attenuating excess water flow to the Caloosahatchee Estuary. Benefits of the project include providing water supply for estuary restoration by attenuating peak flows during the wet season, essential flow for estuary health during the dry season, additional water supplies for agricultural and urban demands, and public access and recreation opportunities. Conceptual engineering and design are complete, and test cell construction is nearing completion. Test cell embankment, seepage, and water quality monitoring plans are complete. Reservoir construction is scheduled to begin in July 2007.

Acceler8 EAA Reservoir – Phase 1 with Bolles and Cross Canals Improvements

This project will capture, move, and store regulatory releases from Lake Okeechobee, thereby reducing the number and volume of harmful discharges to coastal estuaries. This project will capture, move, and store agricultural stormwater runoff, which will reduce the need for emergency flood control backpumping into the lake. Project benefits include providing additional water to meet Everglades and agricultural water demands and lessening water supply dependency on Lake Okeechobee. This project will improve the District's operational flexibility to move water within the EAA, including flow equalization and optimization of STA performance to further reduce phosphorus inflows to the Everglades. Other benefits of this Acceler8 project include improved flood protection for lands adjacent to the Bolles and Cross canals and public access and recreational opportunities. The 30 percent design development has been initiated, and test cell investigations and water flow modeling are underway.

Acceler8 EAA STAs Expansion

This project will further reduce phosphorus levels and help achieve state water quality standards for the Everglades. It will improve the ability of the existing STAs to remove pollutants prior to discharge to the Everglades. This project will provide the District with operational flexibility for directing flows to optimize STA performance in improving water quality entering the Everglades, and will provide public access and recreational opportunities. The District expects

to receive the 404 permit for construction of the reservoir in summer 2006. This project is reported in Chapter 8 of this volume.

Acceler8 Water Preserve Areas

This project includes the Site 1, C-9, C-11, Acme Basin B, and WCA-3A and WCA-3B CERP components. This project will improve Everglades water quality by diverting runoff into impoundments. It will improve hydropatterns in the WCAs along with improved flows to the Everglades National Park (ENP), and will enhance and increase the spatial extent of wetlands adjacent to the remaining Everglades. This project will reduce the seepage of pristine water from the WCAs into urban areas and provide a buffer between natural and developed areas. Benefits of this project include reducing the amount of excess water discharged to tide and “lost” to the system in Palm Beach and Broward counties. Furthermore, this project will provide supplemental water supply deliveries and aquifer recharge to urban areas, thus, reducing demands on Lake Okeechobee and the WCAs. Following are updates for FY2006 on the components that comprise this Acceler8 project:

- **Site 1 Impoundment (Fran Reich Preserve).** The Site 1 Impoundment features an impoundment, a seepage management system, pump station, gated culvert structures, improvements to the Hillsboro Canal, L-40 levee improvements, and recreational features. Engineering, design, and permitting activities proceeded during FY2006. As of June, the District had received all of the permits needed to proceed on the first phase of this project. Acceler8 construction is scheduled to commence in summer 2006.
- **C-9 Impoundment.** This project features a pump station, a gated spillway, gated culverts, C-9 Canal conveyance upgrade, seepage canal with pump station, perimeter levee, windbreaks, and an emergency overflow spillway. Acceler8 commenced design for selected elements to achieve an early construction start to meet the target date of July 2006.
- **C-11 Impoundment.** This project features include an impoundment with a pump station, a three-bay gated spillway and gated culvert, an ungated culvert, two fixed weir structures, seepage canals, embankments, and windbreaks. Acceler8 commenced design for selected elements to achieve an early construction start for the target date of July 2006.
- **Acme Basin B Discharge.** This project includes the Section 24 Impoundment, which includes earthwork, levee, seepage canals, a natural area and recreational components, two pump stations along with gated culverts, and C-1 Canal Improvements. The C-1 Canal and Pump Station 7 began construction in June 2006. The impoundment and its pump are in design, with construction scheduled to begin in February 2007.
- **WCA-3A/3B Seepage Management.** The WCA-3A and WCA-3B Levee Seepage Management Project features ecosystem restoration, seepage reduction and enhancement of wetlands spatial extent. Preliminary engineering is scheduled to be completed in the Third Quarter, and construction is on schedule to begin during the Fourth Quarter of FY2006.

Acceler8 Picayune Strand (Southern Golden Gate Estates) Restoration

This project will restore and enhance the wetlands in Picayune Strand and in adjacent public lands by reducing over-drainage. This project will restore a natural and beneficial sheetflow of water to the Ten Thousand Islands National Wildlife Refuge. The size of wetlands will be significantly increased and major wetland ecosystems will be improved in adjacent lands

including the Fakahatchee Strand State Preserve, Florida Panther National Wildlife Refuge, and Collier Seminole State Park. Increasing and improving wetlands will benefit threatened and endangered species such as the Florida panther and the red cockaded woodpecker. The project will improve water quality and the volume of water delivered to coastal estuaries by moderating large salinity fluctuations caused by fresh water flowing from the Faka Union Canal. This project will maintain existing flood protection for Northern Golden Gate Estates, and will provide public access and recreational opportunities. In 2003, the state of Florida began work to plug the northern seven miles of the Prairie Canal, one of the four large canals that will be filled, in an early effort to expedite restoration of critical western lands. As this work proceeds, work plans are being developed to complete the remaining components of this project. The Prairie Canal construction package includes plugging seven miles of canal using existing material adjacent to the canal; clearing roadways to natural grade; monitoring plants and wildlife; and controlling exotics. The first two miles of the Prairie Canal work were completed during 2004.

Acceler8 Biscayne Bay Coastal Wetlands – Phase 1

This project will restore the quantity, quality, timing, and distribution of fresh water to Biscayne Bay and Biscayne National Park. This project will improve salinity distribution near the shoreline, which will reestablish productive nursery habitat for shrimp and shellfish. Freshwater runoff from the watershed into Biscayne Bay will be captured, treated, and redistributed to create more natural water deliveries. The spatial extent and connectivity of coastal wetlands will be expanded, and improved recreational opportunities will be provided in the bay and adjacent wetlands. For FY2006, ecosystem models are under development, and include additional data collection from Biscayne Bay and surrounding wetlands.

Acceler8 C-111 Spreader Canal

This project will provide more natural sheetflow to Florida Bay by eliminating harmful point source discharges of freshwater through C-111. This project will rehydrate and reestablish sheetflow and hydropatterns that will sustain ecosystems in the Southern Glades and Model Lands. The C-111 Spreader Canal Project will restore the quantity, quality, timing, and distribution of fresh water to estuarine systems of Manatee Bay and Barnes Sound. Public access and recreational opportunities also will be provided. Project alternatives have been developed by the PIR team, and the development of a tentatively selected plan is in progress. The Acceler8 project team has begun the design phase.

Acceler8 COPs

Accelerating the funding, design, and construction of these projects will bring benefits to the Everglades much sooner and more cost effectively. Financing and fast-tracking these projects will avoid expected increases in construction materials and labor costs. The District will finance project construction with Certificates of Participation (COPs). Florida Statutes define COPs as a type of revenue bond that a water management district may issue “to finance the undertaking of any capital or other project for the purposes permitted by the State Constitution.” COPs are statutorily authorized tax-exempt certificates showing participation through ownership of a share of lease payments for a capital facility of a government agency.

In July, the District’s COPs series 2006 received ratings of Aa3, AA+, and AA- from Moody’s Investor Services, Standard & Poor’s and Fitch Ratings, respectively. These outstanding ratings mean the District will be required to carry less bond insurance, resulting in a cost savings. The ratings reflect the strong legal features of the master lease-purchase agreements, the essentiality of the series 2006 projects for the restoration of the Everglades ecosystem, and the District’s underlying credit characteristics. The bonds are scheduled to sell in early September.

ACCELER8 LAND ACQUISITION

To date, most of the land for these projects has been acquired, with much of it purchased in partnership with the federal government. **Table 10** presents the real estate acquisition status for Acceler8 projects.

Table 10. Status of Acceler8 real estate acquisition.

Acceler8 Project	Percentage Acquired
Biscayne Bay Coastal Wetlands – Phase 1	70 percent
C-43 West Reservoir	100 percent
C-44 Reservoir/STA	96 percent
C-111 Spreader Canal	73 percent
EAA Reservoir	99 percent
EAA STAs	100 percent
Picayune Strand Hydrologic Restoration	97 percent
WPAs	100 percent

ACCELER8 WORKFORCE DEVELOPMENT AND PARTNERSHIPS

Building these projects on an accelerated pace is a major economic undertaking that is expected to generate a large demand for goods and services. Special efforts are being made to ensure that a wide variety of vendors and contractors will be utilized, and partnerships are under way with local workforce development organizations to help prepare and train area workers with needed job skills.

CERP PRIORITY PROJECTS – PILOT PROJECTS

Overview of CERP Pilot Projects

Pilot projects authorized under the WRDAs of 1999 and 2000 (**Figure 1**) will be conducted to assist in CERP implementation by determining the feasibility and optimum design of the features prior to embarking on full-scale development. Three projects will address the technical and regulatory uncertainties regarding regional implementation of ASR projects. Three other projects will test other proposed technologies. PMPs have been completed for all of the projects, and Pilot Project Design Reports are in progress. WRDA 1999 authorized the Hillsboro and Lake Okeechobee ASR pilot projects. Authorized under WRDA 2000 are the Caloosahatchee River (C-43) Basin ASR, Lake Belt In-Ground Reservoir Technology, L-31 N Seepage Management, and Wastewater Reuse Technology pilot projects.

Restoring any major part of the Everglades will involve some technical exploration. The District and the USACE are moving forward with the pilot projects for ASR, which is untried on the scale envisioned in CERP. Although these projects are awaiting congressional authorization and appropriations, design and other activities have proceeded, and District and USACE contracts are in progress for construction at the Hillsboro and Lake Okeechobee sites, respectively. If the wells utilizing this 35-year-old technology work as expected, they can replenish urban drinking-water supplies, irrigate farmland, and nourish natural areas while requiring very little land for a very large water return. The status of the CERP Pilot Projects is presented below. More detailed information is found on the 2007 SFER CD-ROM and at the CERP web site at <http://www.evergladesplan.org/>.

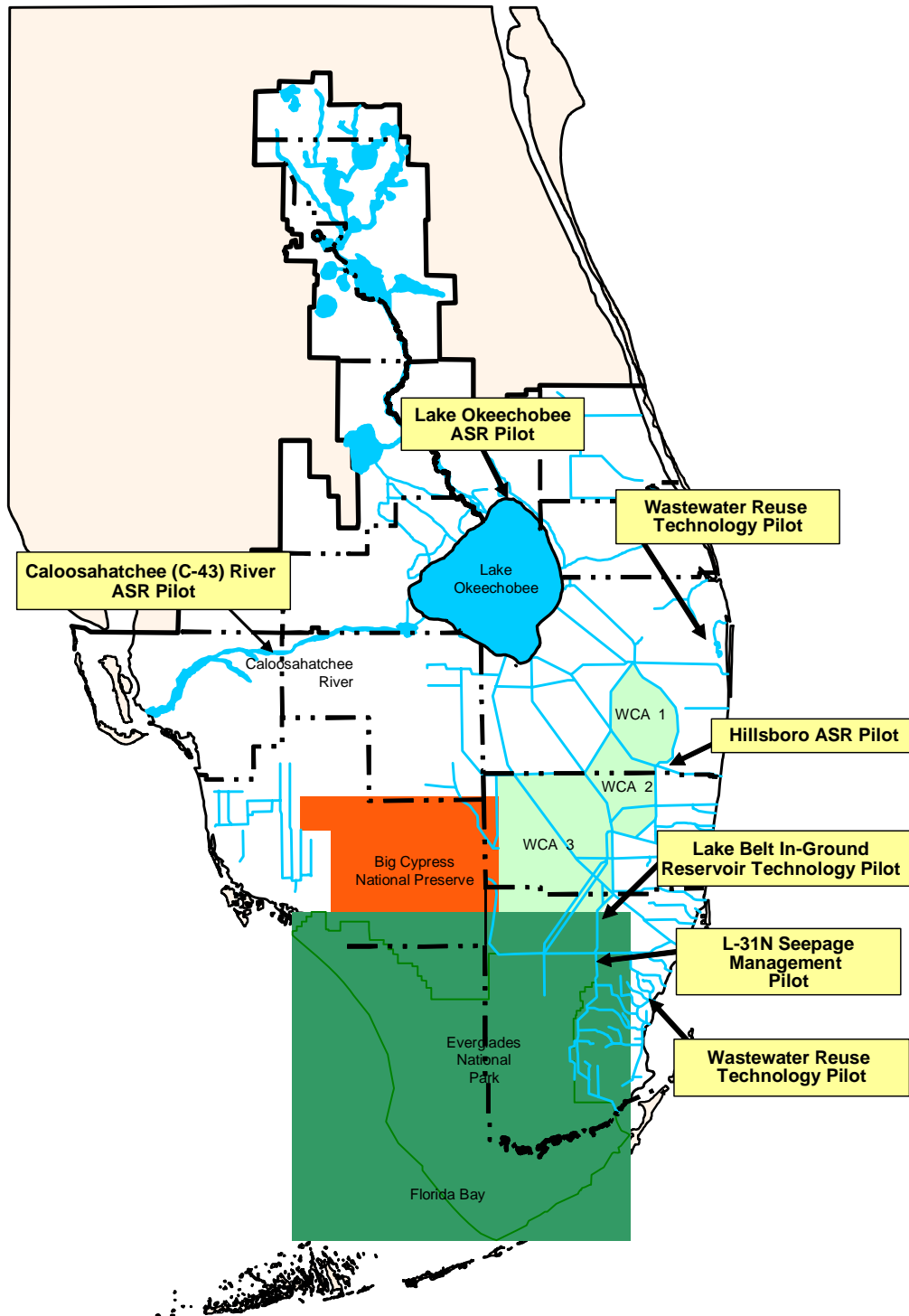


Figure 1. General locations of CERP pilot projects.

Discussion and Status of CERP Pilot Projects

Lake Okeechobee Aquifer Storage and Recovery Pilot

<u>Project Mission:</u>	Construct test wells and collect data
<u>Project Benefits:</u>	Answer technical questions about the use of Aquifer Storage and Recovery (ASR) for CERP. Identify the most suitable sites for the ASR wells and best configuration of the wells near Lake Okeechobee. It will also provide information about the local aquifers and the effects to the stored water.
<u>Component:</u>	Pilot
<u>Authorization:</u>	WRDA 1999
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	<p>This project is multi-purpose and provides benefits to environmental, urban, and agricultural users. Pilot projects were authorized for several components of the CERP which were to be implemented on a very large scale. The components of the CERP had sufficient detail for plan selection but were not of sufficient detail for traditional USACE Feasibility Studies.</p> <p>ASR technology had been demonstrated and was feasible but had not been tested on the scale that was required for CERP. The ASR pilot projects were to answer these questions of scale.</p> <p>The pilot project is necessary to identify the most suitable sites for the aquifer storage and recovery wells in the vicinity of Lake Okeechobee and to identify the optimum configuration of those wells. Additionally, the pilot project will determine the specific water quality characteristics of waters to be injected, the specific water quality characteristics and amount of water recovered from the aquifer, and the water quality characteristics of the receiving aquifer.</p> <p>Further information from the pilot project will provide the hydrogeological and geotechnical characteristics of the upper Floridan Aquifer System within the region, and the ability of the upper Floridan Aquifer System to maintain injected water for future recovery.</p> <p>The pilot projects will provide the technical detail for additional plan formulation and development. This will be a technical data report. From this information judgments can be made on the number of wells required, where to site these wells, and any specific treatment requirements. The pilot phase for Lake Okeechobee is estimated to require six years and cost \$19 million.</p>
<u>Documents:</u>	<p>PMP March 2001 (The PMP - Final can be found online at http://www.evergladesplan.org/pm/pmp/pmp_32_lake_o_asr.cfm)</p> <p>PPDR and Environmental Impact Statement October 2005 (Final)</p>
<u>FY2006 Status:</u>	Groundbreaking for this project, which is being constructed by the USACE, was held in June 2006.

Caloosahatchee River (C-43) River Aquifer Storage and Recovery Pilot

<u>Project Mission:</u>	Construct pilot wells and collect data
<u>Project Benefits:</u>	Answer technical questions about the use of ASR for CERP. The study will identify the most suitable sites for the ASR wells and best configuration of the wells in the Caloosahatchee basin. It will also provide information about the local aquifers and the effects to the stored water.
<u>Component:</u>	Pilot
<u>Authorization:</u>	WRDA 2000
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	<p>ASR wells are proposed in order to maximize the benefits associated with the Caloosahatchee River Storage Reservoir. A pilot project for these wells is necessary to identify the most suitable sites for the aquifer storage and recovery wells in the vicinity of the reservoir and to determine the optimum configuration of those wells.</p> <p>The pilot project will provide information regarding the characteristics of the aquifer system within the Caloosahatchee River basin as well as determine the hydrogeological and geotechnical characteristics of the upper Floridan Aquifer System. The pilot project will also determine the specific water quality characteristics of waters to be injected, the specific water quality characteristics and the amount of water recovered from the aquifer, and the water quality characteristics of water within the receiving aquifer.</p>
<u>Documents:</u>	<p>PMP January 2002 (Final)</p> <p>PPDR and Environmental Impact Statement October 2005 (Final)</p>
<u>FY2006 Status:</u>	Pending

Hillsboro Aquifer Storage and Recovery Pilot

<u>Project Mission:</u>	Construct pilot wells and collect data
<u>Project Benefits:</u>	Answer technical questions about the use of ASR for CERP. The study will identify the most suitable sites for the ASR wells and best configuration of the wells in the Caloosahatchee basin. It will also provide information about the local aquifers and the effects to the stored water.
<u>Component:</u>	Pilot
<u>Authorization:</u>	Hillsboro Impoundment – WRDA 1999; ASR - WRDA 2000
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	The Hillsboro (Site 1) above-ground impoundment operates in conjunction with multiple aquifer storage and recovery wells in order to maximize the benefits of the impoundment. A pilot project for these wells is necessary to determine, the hydrogeological and geotechnical characteristics of the soils and aquifer, the most suitable sites for the ASR wells in the vicinity of the impoundment and the optimum configuration of those wells. The pilot project will also determine, the

specific water quality characteristics of water within the aquifer as well as the quality of water proposed for injection and the water quality characteristics of water recovered from the aquifer.

Documents: PMP March 2001 (Final)
PPDR and Environmental Impact Statement October 2005 (Final)

FY2006 Status: The construction Notice to Proceed was given in December 2005, and construction is scheduled for completion in October 2006. The start of construction was delayed by an issue with the Palm Beach County Zoning Department, which was resolved. Building permits were subsequently obtained, allowing construction to start in May 2006.

Lake Belt In-Ground Reservoir Pilot

Project Mission: Determine reservoir construction technologies, storage efficiencies, impacts on local hydrology, and water quality effects of lime rock mines.

Component: Pilot

Authorization: WRDA 2000

Local Sponsor: South Florida Water Management District

Description: Several projects recommend the use of areas where lime rock mining will have occurred. The initial design of these reservoirs includes subterranean seepage barriers around their perimeter in order to enable drawdown during dry periods, prevent seepage losses, and prevent water quality impacts due to transmissivity of the aquifer in these areas.

The pilot project is required to determine construction technologies, storage efficiencies, impacts on local hydrology, and water quality effects. Water quality assessments will include a determination as to whether the in-ground reservoirs and seepage barriers will allow for storage of untreated waters without concern for groundwater contamination.

Documents: PMP April 2002 (The PMP - Final can be found online at http://www.evergladesplan.org/pm/pmp/pmp_35_lakebelt.cfm)

FY2006 Status: This project has been on hold since FY2005.

L-30 (formerly L-31 N) Seepage Management Pilot

Project Mission: Construct underground barrier and collect data

Project Benefits: Answer technical questions about how to best reduce the rapid loss of water underground from the Everglades. This pilot project will test underground barriers and other technologies.

Component: Pilot

Authorization: WRDA 2000

Local Sponsor: South Florida Water Management District

Description: The purpose of the seepage management pilot is to determine the appropriate technology needed to control levee seepage flow across L-31N Canal adjacent to ENP and provide the appropriate amount of wet season groundwater flow that will minimize potential impacts to the

Miami-Dade County's West Wellfield and freshwater flows to Biscayne Bay. A seepage management feature located along L-31N would reduce some seepage as proposed in the Comprehensive Everglades Restoration Plan, but the L-31N site is located in an area that may be modified, which could render it less useful for long term affects.

There are similar issues regarding levee seepage along the southern portion of L-30 Canal adjacent to WCA-3B. A seepage management feature along the L-30 levee would help reduce seepage lost from WCA-3B, which in turn will reduce water flowing farther south into the L-30/L-31N system. Field tests, seepage reports, and historical data have independently shown the L-30 levee north of U.S. Highway 41 as having a higher seepage rate than L-31N. Pilot project monitoring and data gathering at the new project location – along the southern portion of the L-30 levee – will provide essential information needed to further address uncertainties prior to recommending full-scale implementation of seepage management measures adjacent to WCA-3B and ENP.

The purpose of the PMP is to establish the scope, define a schedule, and determine costs associated with conducting the L-30 Seepage Management Pilot (formerly L-31N Seepage Management Pilot) PPDR. This PMP documents the assumptions, work tasks, products, and level of detail necessary to formulate a range of alternative plans; to assess the effects of the alternative plans; and to present a clear rationale for project features selected for implementation.

The PMP acts as a general guide for the PPDR. Specific alternatives, evaluation criteria and implementation goals will be determined during the PPDR Phase. This PMP was developed, and will be updated as necessary, by the USACE in collaboration with the District, utilizing a federal, state, and tribal interagency PDT.

Documents: PMP December 2005 (The PMP - Draft can be found online at http://www.evergladesplan.org/pm/pmp/pmp_36_130.cfm)

FY2006 Status: In 2004, a Seepage Management Sub-team was assembled to develop options and alternatives that potentially could address seepage by 2010. In 2005, six seepage management options were presented, and the team was directed to evaluate a seepage barrier along a portion of the L-30 levee north of U.S. 41. Seepage barrier scale and cost comparisons were presented in May 2005, and the USACE proposed expanding the area and increasing the project funding limit. These changes require a PMP revision; a review and comment period for federal, state, and local agencies; and approval by the USACE's Project Review Board and District's Executive Director. These activities may occur during the upcoming fiscal year, with the resumption of the PPDR preparation pending WRDA authorization.

Wastewater Reuse Pilot

<u>Component:</u>	Pilot
<u>Authorization:</u>	WRDA 2000
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	<p>Currently, two projects involve the advanced treatment of wastewater. This pilot project will address water quality issues associated with discharging reclaimed water into natural areas such as the West Palm Beach Water Catchment Area, Biscayne National Park, and the Bird Drive basin as well as determine the level of superior treatment and the appropriate methodologies for that treatment.</p> <p>A series of studies will be conducted to help determine the level of treatment needed. A pilot facility will be constructed in South Miami-Dade to determine the ecological effects of using superior, advanced treated reuse water to replace and augment freshwater flows to Biscayne Bay and to determine the level of superior, advanced treatment required to prevent degradation of freshwater and estuarine wetlands and Biscayne Bay. The constituents of concern in wastewater will be identified and the ability of superior, advanced treatment to remove those constituents will be determined.</p> <p>The City of West Palm Beach is constructing a pilot facility to treat wastewater from the East Central Regional Wastewater Treatment Facility using advanced and superior wastewater treatment processes to remove nitrogen and phosphorus. After treatment, the wastewater will be used to restore 1,500 acres of wetlands and to recharge wetlands surrounding the City of West Palm Beach's wellfield. A portion of the treated wastewater will be used to recharge a residential lake system surrounding the city's wellfield and a Palm Beach County wellfield. In addition to the monitoring performed by the city, CERP will also monitor the site and apply the data to potential reuse sites in West Miami-Dade.</p> <p>The research associated with West Palm Beach and West Miami-Dade will be performed under Part 1 of the pilot project. Part 2 of the pilot project will involve construction at a pilot facility in South Miami-Dade.</p>
<u>Documents:</u>	PMP December 2003 (The PMP – Final can be found online at http://www.evergladesplan.org/pm/pmp/pmp_37_ww_reuse_pp.cfm)
<u>FY2006 Status:</u>	The PMP and Technical Report were completed in the First Quarter of FY2005, then, in accordance with the MISP, the project was placed on hold until 2015.

CERP PRIORITY PROJECTS – FEASIBILITY STUDIES

Overview of CERP Feasibility Studies

Because the time frame of the Restudy did not permit a thorough investigation of all of the regional water resource challenges of South Florida, the conduct of new studies (see www.evergladesplan.org/pm/studies/studies.cfm) was proposed under the authority of WRDA 1996, which allows for the continuation of studies and analyses that are necessary to further CERP. These studies are intended to investigate conceptual designs and to make regional recommendations for meeting the future needs of agricultural, urban, and environmental users.

This CERP Annual Report includes the following reconnaissance and feasibility studies:

- Additional Water for ENP and Biscayne Bay Reconnaissance Study
- Comprehensive Integrated Water Quality Feasibility Study
- Florida Bay/Florida Keys Feasibility Study
- Indian River Lagoon – North Feasibility Study
- Indian River Lagoon – South Feasibility Study
- Southwest Florida Feasibility Study
- Water Preserve Areas Feasibility Study

Status updates for the CERP Feasibility Studies during FY2006 are provided below. **Figure 2** shows the general location of the feasibility studies within the District. More detailed information is found on the 2007 SFER CD-ROM and the at CERP web site.

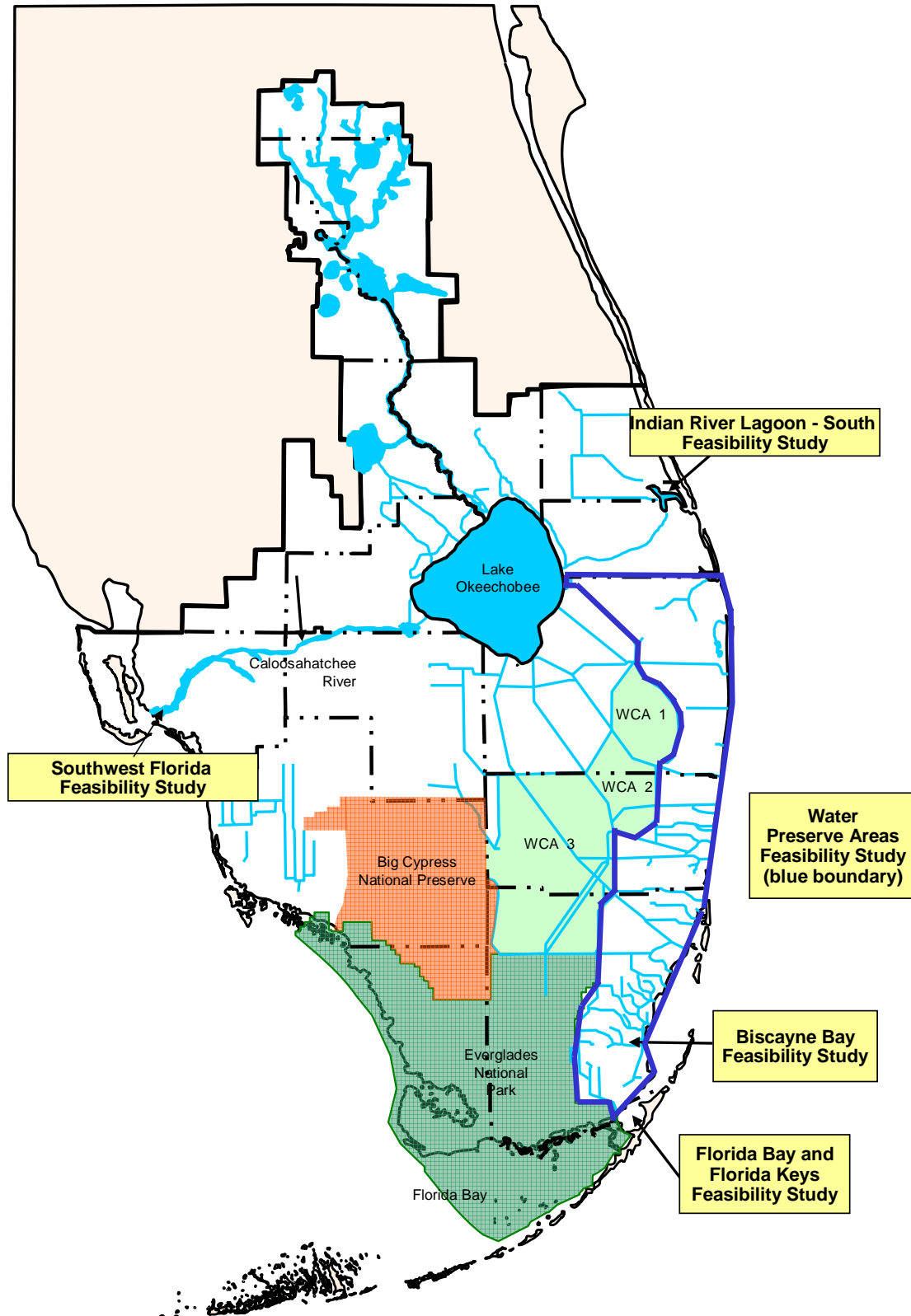


Figure 2. General locations of feasibility studies within SFWMD.

Discussion and Status of CERP Feasibility Studies

Additional Water for ENP and Biscayne Bay Reconnaissance Study

The USACE initiated the Additional Water for ENP and Biscayne Bay Reconnaissance Study to investigate the need for, quantity needed, timing, and distribution, and impacts and benefits associated with providing additional water to ENP and Biscayne Bay in association with CERP. The final study report confirmed that federal participation is warranted to proceed to a feasibility-level study; however, a non-federal sponsor for the feasibility phase must be identified. The report also recommended deferral of the feasibility phase until completion of the technical documentation report for the Initial CERP Update. Miami-Dade County Department of Environmental Resource Management (DERM) is the local sponsor for the Biscayne Bay Feasibility Study, which is composed of hydrodynamic modeling, application of the water quality tool, and numerical biological modeling. Completion of the Phase II Feasibility Study is awaiting funding.

Comprehensive Integrated Water Quality Feasibility Study

The Comprehensive Integrated Water Quality Feasibility Study is a study co-sponsored by the USACE and the FDEP. The study is the result of a recommendation of the Restudy, which recognized the need for a comprehensive plan that would integrate CERP projects and other federal, state, and local government programs. Negotiation of a Feasibility Study Cost-Sharing Agreement between the USACE and the FDEP is pending.

Florida Bay/Florida Keys Feasibility Study

The project authorization for the Restudy directs the development of a hydrodynamic model for Florida Bay. Related tasks include developing data to support analysis of the effect of the C&SF Flood Control Project on historic and current pathways and volumes of freshwater inflows into Florida Bay, developing data to support analysis of the effect of freshwater inflows on salinity, and determining the biological responses to changes in salinity gradients and salinity fluctuations. Hydrodynamic model runs, consistent with the CERP Guidance Memoranda, neared completion during FY2006. Integration of the Water Quality Model and completion of Management Scenarios modeling is progressing towards completion in the current fiscal year. By the end of FY2006, it is anticipated that the Modeling Report and the transfer of technology will be completed.

Indian River Lagoon – North Feasibility Study

Issues under consideration for the Indian River Lagoon – North Feasibility Study include improving habitat, improving circulation, improving water quality, developing a sediment strategy, better control of runoff, exotic vegetation removal, and increasing recreational opportunities. The St. Johns River Water Management District is the local sponsor for this effort, which will improve habitat, circulation, and water quality; develop a sediment strategy; provide better control of runoff; remove exotic vegetation; and increase recreational opportunities.

Indian River Lagoon – South Feasibility Study

The Indian River Lagoon – South Feasibility Study investigated the options to alter the detrimental effects from the flow of surface waters through the existing C&SF canal system on the St. Lucie Estuary and Indian River Lagoon. The C&SF project features in this study area are C-25 (Belcher Canal), C-24, C-23, and C-44 (St. Lucie Canal). This study focused on making improvements, to restore the environmental health of the receiving water bodies as well as their watershed. The results of this study produced a final PIR in March 2004. The PIR plan, which will create habitat improvement in the estuary and lagoon, is awaiting authorization under a WRDA.

Southwest Florida Feasibility Study

The Southwest Florida Feasibility Study will identify water resource related problems and opportunities and provide a framework to address the health of aquatic ecosystems, water flows, water quality, water supply, flood protection, wildlife, biological diversity, and natural habitat. The Study made great progress in FY2006, notwithstanding USACE direction in February to change the focus to projects that would reduce flooding and boost water supplies. The PDT determined that environmental restoration takes precedence over drainage and water supply. During the fiscal year, the Study efforts produced a list of 115 potential restoration projects. The target completion date was changed from March 2005 to October 2008 due to difficulties in obtaining and reconciling necessary water flow data for the region, and in developing and calibrating new hydrologic models. The PDT is working to complete performance measures and to formulate Existing Conditions and Future Without Project conditions.

Water Preserve Areas Feasibility Study

The WPAs Plan in Palm Beach, Broward, and Miami-Dade counties is essential to CERP, comprising an interconnected series of marshlands, impoundments, STAs, conveyance and aquifer recharge areas. The WPAs provide a critical source for new water by reducing undesirable losses from the natural system through seepage and capturing and storing stormwater runoff that was previously discharged to tide. The WPAs Feasibility Study provides the basis of information for the PIRs that will be developed for the following projects and components:

- Strazzulla Wetlands
- Site 1 Impoundment
- C-4 Structure
- Bird Drive Recharge Area
- Broward County WPA (which includes C-9 Impoundment/STA, C-11 Impoundment and Diversion Canal and WCA-3A/3B Levee Seepage Management)
- WCA-2B Flows to the ENP (which includes Phase 1 of Central Lake Belt Component and WCA-3 Flows to the Central Lake Belt)
- WPA Conveyance (which includes Dade-Broward Levee Improvements and Phase 1 of North Lake Belt Component)

CERP PRIORITY PROJECTS – CRITICAL RESTORATION PROJECTS

Overview of Critical Restoration Projects

The progress made on the nine Critical Restoration Projects (CRPs) (**Figure 3**) authorized under WRDA 1996, with modification in WRDA 1999, to produce immediate, substantial and independent benefits prior to CERP is summarized here, with details provided in the 2007 SFER CD-ROM and on the USACE Jacksonville District web site at <http://www.saj.usace.army.mil/projects/index.html>. Seventy-five million dollars in federal funds were authorized for appropriation to be matched by local sponsors, while the maximum federal expenditure on any one project was capped at \$25 million. To assist with implementing these CRPs, \$7 million in federal funds for land acquisition were transferred to the state through a grant administered by the USDOJ.

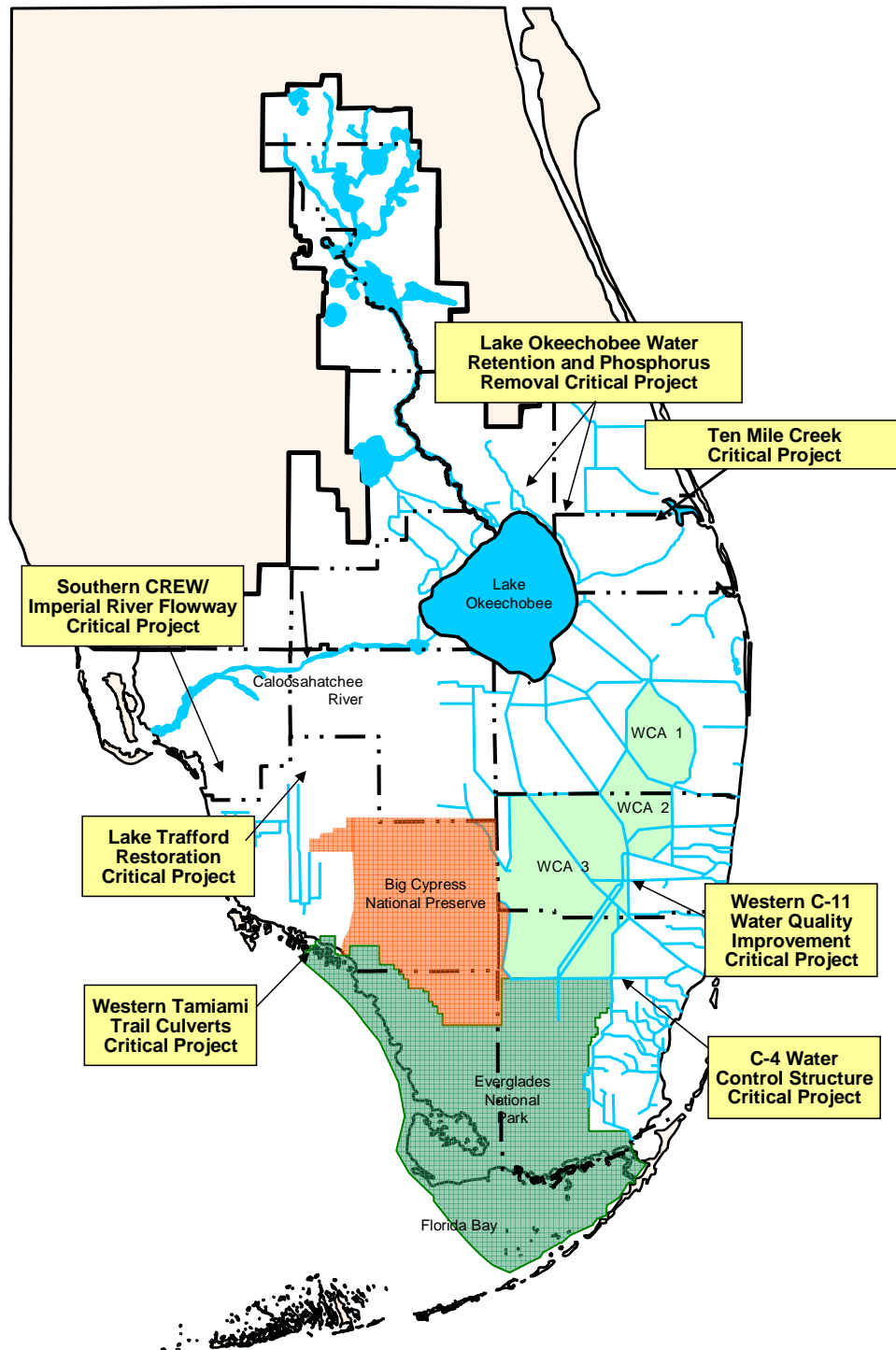


Figure 3. General location of critical restoration projects.

Discussion and Status of Critical Restoration Projects

Lake Okeechobee Water Retention/Phosphorus Removal

Construction at the 190-acre STA on Grassy Land Ranch on Taylor Creek and the 780-acre Nubbin Slough STA on the former New Palm/Newcomer Dairy site was completed in FY2006. This project re-established wetlands that were drained previously for agriculture and constructed STAs to reduce phosphorus loading to Lake Okeechobee. In April, a ribbon-cutting ceremony marked the milestone completion of construction of these STAs north of the lake.

Lake Trafford Restoration

From October 2005 until May 2006, on-site work progressed around the clock to remove muck build-up in Lake Trafford. The computerized dredging system extracted sediment from the lake's bottom and pumped it through a one-mile long pipe to settling ponds north of the lake. The settling ponds help cleanse the water before it is returned to the lake. The District's crews pumped 13,000 gallons of the sediment and water out of the 1,400 acre lake every minute, resulting in noticeable improvements in the water quality and less organic material in the lake. This project is an important component of Everglades restoration, as the lake periodically overflows its banks, providing freshwater to the Corkscrew Swamp's vital wetland ecosystem. The project's containment facility and base bid dredging have been completed. The cost estimates for completion of this project in combination with the other CRPs exceeded the USACE's appropriation cap set by WRDA 1996. The District assumed 100 percent of the cost of detailed design and construction with the intent of receiving credit or reimbursement from the USACE if Congress authorizes the increase in the federal cap for these projects.

Dredging of the lakeside littoral zone was stopped because of low water levels, which prevented the contractor's dredge from getting close enough to the shore. A dry spring shrank the near-shore water depths to an unworkable level. The contractor was willing to complete the job, but negotiations were ended upon insistence of payment in full regardless of whether all of the muck was removed. The construction contract provided for a \$250,000 allowance for partial muck removal closer to the shoreline until more detailed muck depth data could be obtained. With additional lake boring data, the contractor quote was \$5.1 million. The original cost of the entire project was estimated at approximately \$28 million. This was reduced with consultant assistance to approximately \$16 million. The contract ultimately was awarded for \$10.4 million. So, despite the work that remains, the project is expected to be completed within the revised cost estimate of \$16 million. The District plans to award a contract by October, for the work to be completed within one year. This project will improve water quality and enhance fish and wildlife habitat in the lake.

Southern CREW/Imperial River Flow-way

This project is approximately 80 percent complete, with construction proceeding as restoration lands are acquired. Land acquisition is on hold pending USDOJ review and approval of an application and grant cost share agreement submitted by the District under which the USDOJ will provide matching funds for acquisition of the lands needed for this project. This project will restore historical sheetflow, reduce freshwater discharges to Estero Bay during the rainy season, reduce nutrient loading to the Imperial River and Estero Bay, and reduce flooding west of the project area. The cost estimates for this project in combination with the other CRPs exceed the USACE's appropriation cap set by WRDA 1996. Land restoration activities such as backfilling drainage ditches, demolishing existing structures, removing illegal dumping, and improving wildlife habitat have progressed, with the assistance of the Florida Wildlife Conservation Commission.

Ten-Mile Creek

The Ten-Mile Creek basin contributes the second largest volume of stormwater of the St. Lucie Estuary's five tributary basins. This project is located at the headwaters of the North Fork of the St. Lucie River Aquatic Preserve. The project was initiated in the 1990s to moderate high-water volume freshwater flows and salinity fluctuations in the SLE, to reduce sediment and nutrient loads, and to benefit estuarine habitat. Capital construction was completed on schedule in December 2005. In April 2006 a ribbon-cutting ceremony marked the milestone completion of construction this project. The Interim Operations and Testing Phase began in the second quarter of FY2006. Along with completion of the remote telemetry system, interim testing and monitoring, including periodic safety inspections, is expected to progress through 2007.

Western Tamiami Trail Culverts

The District's work progressed on culvert penetrations, guard rails, and ancillary components along the first five miles beginning at State Road 92 and proceeding eastward; and these five miles have been completely repaved. Seven culverts were installed during FY2006, and project construction was completed on time and within budget in May 2006. The Tamiami Trail Phase I work has been incorporated into the Picayune Strand PIR. Once the PIR is authorized by the Congress, the Tamiami Trail PCA will be voided, and the Tamiami Trail Phase I will be fully eligible for cost share under the Picayune Strand project. At that point, a new PCA will be negotiated for the Tamiami Trail Phase II. The USACE is the lead agency for Tamiami Trail Phase II. Under the current appropriation authority, federal contributions will not be sufficient to share construction costs with the District on the Southern CREW, Lake Trafford, and Tamiami Trail Culverts projects. The District is proceeding with construction on all or a portion of these projects with its own funding. Recently introduced WRDA bills include language that will raise the federal program cap from \$75 million to \$95 million and per-project cap from \$25 million to \$30 million, which will allow the USACE to share increased project costs.

Completed Critical Restoration Projects

- **East Coast Canal Structures.** Construction of the C-4 structure was completed in July 2003, and the project is now operational. This project will help reduce seepage losses from the Everglades, increase aquifer recharge, and enhance habitat in the Pensucco Wetlands.
- **Florida Keys Carrying Capacity Study.** The user's manual published in March 2003 provides local planners and decision makers with an impact assessment model and planning tool to determine whether and how their comprehensive plans should be amended.
- **Seminole Big Cypress Reservation Water Conservation Plan.** Construction of Phase I, the conveyance canal system on the east side of the reservation, was completed in May 2004. Canal pump stations will connect this conveyance canal system to the North Feeder Canal system. This project will enhance the Big Cypress Reservation's water storage capacity, improve wetland hydrology, enhance flood protection and reduce the concentration of phosphorus flowing off reservation lands. The USACE has completed the designs for Phase II.
- **Tamiami Trail Culverts.** Construction of Phase I, the western portion of the project located south of the Picayune Strand Restoration project, started in June 2004 and was completed in March 2006. Implementation was accomplished with District and Florida Department of Transportation (FDOT) funds for culvert construction and road resurfacing, respectively. Construction of Phase II, the eastern portion of the project, is dependent upon additional funding. The cost estimate for completion of

this and other CRPs exceeded the USACE appropriation cap set in WRDA 1996. For purposes of improving water quality, this project will help restore more natural hydropatterns and improve sheetflow of surface water within the Ten Thousand Islands National Wildlife Refuge, Rookery Bay Estuarine Research Reserve and Aquatic Preserve, Big Cypress National Park, and ENP.

- **Western C-11 Basin Water Quality Improvement.** Construction of the S-9A pump station and the S-381 structure was completed in 2005. During non-flood conditions, these new features will separate seepage from stormwater runoff, allowing the return of seepage waters to WCA-3A.

CERP PRIORITY PROJECTS – OTHER DISTRICT-SPONSORED PROJECTS

Overview of Other District-Sponsored Projects

Work has commenced on several other CERP projects; the SFWMD is the local sponsor for most of these other projects. The PMPs have been completed for many of these projects, and PIRs have been initiated. Up-to-date information on these newly rescheduled projects can be found on the CERP web site at <http://www.evergladesplan.org>. Acceler8 projects can be viewed on the Acceler8 web site at <http://www.evergladesnow.org>.

In May, the Northwest Fork of the Loxahatchee River took a step closer to environmental recovery when the District's Board authorized acquisition of approximately 1,282 acres in southern Martin County for \$37.7 million. Funded by the Save Our River Everglades Trust Fund, the land, which is known as Pal Mar Sections 21 and 28, is needed to re-establish a healthier, more natural freshwater flow between the Pal Mar natural area and the Northwest Fork of the Loxahatchee River through Cypress Creek. Loxahatchee River and Slough restoration is an integral component of the North Palm Beach County – Part 1 CERP project.

Planning continues on key projects such as the C-111 Spreader Canal, which has the goal of providing a more natural flow of water to Florida Bay and eliminating harmful discharges. Implementation of the C-111 project will be a timely, solid first step in restoration of the bay's freshwater wetlands, tidal wetlands and near-shore habitat. The project's first phase will include the construction under the Acceler8 initiative of a five-mile-long west-to-east canal to join the C-111, at the junction of which will be constructed a pump station to redirect water from the C-111 to a new spreader canal. Most canals are built to contain water; the spreader canal is being designed to allow water to flow over the banks onto the flat marshes north of the bay, allowing the water to move in a more natural pattern. This first phase may begin as early as November 2007.

The state has implemented several projects to realize earlier restoration benefits. The 2004 completion of the Prairie Canal Backfilling project by the District is one example. The project is already providing a portion of the benefits envisioned in the Picayune Strand Hydrologic Restoration Project by reducing drainage of adjacent natural areas, including Fakahatchee Strand State Preserve and the Florida Panther National Wildlife Refuge by demonstrating that native vegetation quickly covers the backfill area with few nuisance or exotic species. Ospreys and wading birds have been observed foraging in the area, and some beneficial surface water flows were noted during the 2004 wet season.

Discussion and Status of Other District-Sponsored CERP Projects

Acme Basin B Discharge

<u>Project Mission:</u>	Construct reservoir and water conveyance features
<u>Project Benefits:</u>	Add new source of clean fresh water to the Arthur R. Marshall Loxahatchee National Wildlife Refuge and reduce harmful discharges to the Lake Worth Lagoon. Additional information on the Refuge can be found online at http://www.fws.gov/loxahatchee/home/default.asp .
<u>Component:</u>	Other Program Element
<u>Authorization:</u>	Section 601(c)(3) of WRDA 2000 (Additional Program Authority)
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	<p>Acme Basin B is one of two primary drainage basins within the Acme Improvement District. The Acme Improvement District, a dependent district to the Village of Wellington, is located in central Palm Beach County, located in Township 43 South and 44 South, Range 41 East. Acme Basin B boundaries generally follow Pierson Road to the north, Flying Cow Road to the west, the Arthur R. Marshall Loxahatchee National Wildlife Refuge to the southwest and south and Lake Worth Drainage District to the east.</p> <p>Acme Basin B encompasses approximately 8,680 acres of low-density development with the primary land uses being rural residential lots and nurseries with a substantial presence of stables and other equestrian uses.</p> <p>The primary goal of the Acme Basin B Discharge project is to provide surface water to the refuge that would otherwise be routed through Basin A to C-51 and lost to tide.</p>
<u>Documents:</u>	<p>PMP October 2003 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_38_acme.cfm.)</p> <p>Draft PIR December 2005 not available</p>
<u>FY2006 Status:</u>	This project is included in the Acceler8 initiative to comply with the Everglades Forever Act target date of December 2006. PIR activities were completed, and Acceler8 construction initiated in FY2006.

Aquifer Storage and Recovery Regional Study

<u>Component:</u>	None
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	<p>The ASR Regional Study is principally a data compilation and analysis project designed to evaluate potential effects of the full-scale CERP ASR Program on economically-disadvantaged communities, existing users of the Floridan Aquifer System, agribusiness, utilities, and the environment. The project is designed to address regional ASR issues raised by the ASR Issue Team, Committee for Restoration of the Greater Everglades Ecosystem, and other interested parties that are beyond the scope of the ASR Pilot Projects.</p>

The ASR Reference List is a searchable index (<http://green.cerpzone.info/asr/default.jsp>) of a compilation of key documents related to the ASR program. As part of the ASR Regional Study, a large literature search was completed. This literature search developed a list of key documents related to the ASR Program. The document list is extensive and includes reports from federal agencies, state agencies, universities, consulting engineering firms and private organizations.

The literature search compiled the various bibliographic references into categories and reviewed a large portion of them. Key data descriptions and codes were utilized to separate the various references into "searchable" categories. Although it has over 1,600 separate documents, it is likely that several hundred more relevant documents could exist. It is hoped that other documents will be added to the working list and the database will be kept current during the ASR Regional Study.

This report contains a Final Pilot Project Design Report (PPDR) dated October 2004 followed by a Final Environmental Impact Statement (FEIS) associated with the Comprehensive Everglades Restoration Plan (CERP). It references three CERP pilot projects using the ASR technology – the Lake Okeechobee ASR Pilot Project, the Hillsboro ASR Pilot Project, and the Caloosahatchee ASR Pilot Project.

The PPDR and FEIS are intended to function as a decision document for engineering options for the field pilot tests recommended by the C&SF Project Restudy Report, and authorized in WRDA 1999 and WRDA 2000. These tests are required, along with other evaluations, before the co-sponsors of the CERP program, the USACE and the District, can determine the feasibility of full-scale implementation of ASR technology proposed in the CERP.

Documents: PMP August 2003 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_44_regional.cfm.)
Final PPDR and FEIS October 2005 (The Final PPDR and EIS can be found online at http://www.evergladesplan.org/pm/projects/pdp_asr_comb_deis_ppdr.cfm.)

FY2006 Status: The Notice to Proceed for the construction contract for the Hillsboro ASR Pilot Project was issued in FY2006, and the Hillsboro project results will be incorporated in the regional study. For FY2006, the ASR Regional Study is proceeded on time and within budget.

Big Cypress/L-28 Interceptor Modifications

Component: CCC

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes modification of levees and canals, water control structures, pumps, and stormwater treatment areas with a total storage capacity of 7,600 acre-feet located within and adjacent to the Miccosukee and Seminole Indian Reservations in Collier and Hendry counties.

The initial design of the stormwater treatment areas assumed a total acreage of 1,900 acres with the water level fluctuating up to 4 feet above grade. Conceptual sizes of the stormwater treatment areas were based on interim phosphorus concentration targets in the conceptual plan for the Everglades Construction Project. The final size, depth and configuration of this facility, including the stormwater treatment areas, will be determined through more detailed planning and design.

Design of the stormwater treatment areas will be based on water quality criteria of the Seminole Tribe and criteria applicable to Big Cypress National Preserve, as appropriate. The purpose of this project is to re-establish sheetflow from the West Feeder Canal across the Big Cypress Reservation and into the Big Cypress National Preserve, maintain flood protection on Seminole Tribal lands, and ensure that inflows to the North and West Feeder Canals meet applicable water quality standards. Consistency with the Seminole Tribe's Conceptual Water Conservation System master plan will be maintained.

Upstream flows entering the West and North Feeder Canals will be routed through two stormwater treatment areas to be located at the upstream ends of the canals. Sheetflow will be re-established south of the West Feeder Canal by a system to be developed consistent with the Seminole Tribe's Conceptual Water Conservation System master plan. After conversion to a pump station, S-190 will also push flows south into the L-28 Interceptor Canal where sheetflow to the southwest will also be re-established with backfilling and degradation of the southwest levee of the canal.

Documents: None

FY2006 Status: This project is not currently authorized.

Bird Drive Recharge Area

This separable element, whose purpose is to recharge groundwater and reduce seepage from the ENP buffer area, has been incorporated into the Everglades National Park Seepage Management Project.

Biscayne Bay Coastal Wetlands

Project Mission: Construct pump stations, spreader swales, stormwater treatment areas, flow-ways, levees and culverts, and backfill canals.

Project Benefits: Restore Biscayne Bay which includes Biscayne National Park. The natural overland sheetflow of water has been changed with the construction of drainage canals.

This project will restore the overland sheetflow in a 13,600-acre area through the construction of spreader canals and other features. The more natural water flow will improve the ecology of Biscayne Bay including its freshwater and tidal wetlands, nearshore bay habitat, marine nursery habitat, oysters and the oyster reef community.

Component: FFF and OPE

Local Sponsor: South Florida Water Management District

Authorization: Not Currently Authorized

Description: This project includes pump stations, spreader swales, stormwater treatment areas, flow-ways, levees, culverts, and backfilling canals located in southeast Miami-Dade County and covers 13,600 acres from the Deering Estate at C-100C, south to the Florida Power and Light Turkey Point power plant, generally along L-31E.

The purpose of this project is to rehydrate wetlands and reduce point source discharge to Biscayne Bay. The proposed project will replace lost overland flow and partially compensate for the reduction in groundwater seepage by redistributing, through a spreader system, available surface water entering the area from regional canals. The proposed redistribution of freshwater flow across a broad front is expected to restore or enhance freshwater wetlands, tidal wetlands, and nearshore bay habitat.

Sustained lower-than-seawater salinities are required in tidal wetlands and the nearshore bay to provide nursery habitat for fish and shellfish. This project is expected to create conditions that will be conducive to the re-establishment of oysters and other components of the oyster reef community. Diversion of canal discharges into coastal wetlands is expected not only to re-establish productive nursery habitat all along the shoreline but also to reduce the abrupt freshwater discharges that are physiologically stressful to fish and benthic invertebrates in the bay near canal outlets.

More detailed analyses will be required to define target freshwater flows for Biscayne Bay and the wetlands within the redistribution system. The targets will be based upon the quality, quantity, timing and distribution of flows needed to provide and maintain sustainable biological communities in Biscayne Bay, Biscayne National Park, and the coastal wetlands. Additionally, potential sources of water for providing freshwater flows to Biscayne Bay will be identified and evaluated to determine their ability to provide the target flows. The component Biscayne Bay Coastal Canals as modeled in D-13R and the Critical Project on the L-31E Flow-way Redistribution are smaller components of the Biscayne Bay Coastal Wetlands project described above.

Documents: PMP August 2002 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_28_biscayne.cfm.)

PIR not available

FY2006 Status: The Biscayne Bay Coastal Wetlands has been established as an Acceler8 effort; the portions being accelerated are the northern Deering Glade and Cutler Wetlands. The Draft PIR/EIS was completed in FY2006.

Broward County Secondary Canal System

Component: CC

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: The purpose of this project is to reduce water shortages in the local wellfields and stabilize saltwater interface. This will be accomplished by pumping excess water from C-9, C-12, and C-13 Canal basins into the coastal canal systems in order to maintain canal stages at optimum levels.

To maintain these stages, water will be drawn from other sources such as Site 1 Impoundment and North Lake Belt Storage Area, Lake Okeechobee and the WCA when basin water is insufficient.

This project includes a series of water control structures, pumps and canal improvements in C-9, C-12 and C-13 Canal basins and the east basin of the North New River Canal in central and southern Broward County.

Documents: None

FY2006 Status: This project has not started.

Broward County Water Preserve Area

Project Mission: Construct two reservoirs and add wetlands buffer strip

Project Benefits: Capture and store rainwater, reduce phosphorus and other unwanted nutrients entering the Everglades, reduce seepage out of the Everglades, increase urban drinking water supplies, reduce saltwater intrusion in underground water supplies, and increase the spatial amount of wetlands in South Florida.

Component: O, Q, and R

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: Three components comprise this project: C-11 Impoundment, C-9 Impoundment, and WCA-3A/3B Levee Seepage Management. The impoundment areas will aid in reducing seepage from the WCA-3A/3B Seepage Management Area; provide groundwater recharge; provide adequate water supply to urban areas; and prevent saltwater intrusion.

The WCA-3A/3B Levee Seepage Management system will focus on seepage reduction by allowing higher water levels in the L-33 and L-37 borrows. The purpose of the C-11 Impoundment is to direct runoff from the western C-11 drainage basin into the impoundment in lieu of pumping the untreated runoff via S-9 pump station into the WCA-3A. If water is not available in the impoundment area to perform these functions, S-381 will be opened to allow seepage water to recharge the basin and prevent excessive dry outs. In addition, seepage will be collected and returned to the impoundment area.

The purpose of C-9 Impoundment is to pump runoff from the western C-9 drainage basin and diverted water from the western C-11 basin into the impoundment. As a result, this impoundment will assist in reducing seepage from the WCA-3A/3B Levee Seepage Management.

Documents: PMP May 2004 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_45_broward_wpa.cfm.)

PIR/EIS not available

FY2006 Status: The Draft PIR/EIS has been under review by USACE headquarters since early December 2005; this extended review period has delayed the release of the document. Pre-construction engineering and design activities on the C-9 Impoundment/STA, C-11 Impoundment, and

Seepage Management Area features progressed in accordance with the Acceler8 initiative, with construction scheduled to begin in summer 2006.

C-4 Structure

<u>Component:</u>	T
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	This component is a water control structure in the C-4 Canal just east of the intersection with the C-2 Canal in Miami-Dade County. The primary purpose of S-380E (C-4 Structure) is to divert water south into the C-2 Canal for ground water wellfield recharge. The ability to direct flows south into the C-2 Canal will provide more freshwater flows to the central Biscayne Bay area. The structure can be operated to maximize the flow in both canals during the wet season to optimize flood protection. Although incidental, the possibility of improving flood protection of the C-4 basin is significant since flooding continues to be an issue for the surrounding communities.
<u>Documents:</u>	None
<u>FY2006 Status:</u>	The work is on hold and may be proposed under a separate authority or performed by the District.

C-43 Basin ASR – Part 2

<u>Component:</u>	D Part 2
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	<p>This project is the second part of the C-43 Basin Storage Reservoir and ASR component. This project includes ASR wells with a total capacity of approximately 220 million gallons per day and associated pre- and post-water quality treatment located in the C-43 basin in Hendry, Glades, or Lee counties. The initial design of the wells assumed 44 wells, each with the capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post treatment. The level and extent of treatment and number of the ASR wells may be modified based on findings from a proposed ASR pilot project.</p> <p>The purpose of this project is to capture C-43 basin runoff and releases from Lake Okeechobee. The wells will be designed for water supply benefits, some flood attenuation, water quality benefits to reduce salinity and nutrient impacts of runoff to the estuary, and to provide environmental water supply deliveries to the Caloosahatchee Estuary. Excess runoff from the C-43 basin and Lake Okeechobee flood control discharges will be pumped into the C-43 basin Reservoir. Water from the reservoir will be injected into the aquifer storage and recovery wellfield for long-term (multi-season) storage.</p> <p>Any estuarine demands not met by basin runoff and the aquifer storage and recovery wells will be met by Lake Okeechobee as long as the lake</p>

stage is above a pre-determined level. Lake water is also used to meet the remaining basin demands subject to supply-side management.

Documents: None

FY2006 Status: This project has not started.

C-43 Basin Storage Reservoir – Part 1

Project Mission: Construct reservoir and water conveyance features

Project Benefits: Improve health of Lake Okeechobee and coastal estuaries; and provide an additional source of water for the natural ecosystem, people and farms.

Component: D Part 1

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project is the first part of the C-43 Basin Storage Reservoir and ASR component. The project includes an above ground reservoir with a total storage capacity of approximately 160,000 ac-ft located in the C-43 basin in Hendry, Glades, or Lee counties. The initial design of the reservoir assumed 20,000 acres with water levels fluctuating up to 8 feet above grade. The final size, depth, and configuration of this facility will be determined through more detailed planning and design.

The purpose of this project is to capture C-43 basin runoff and releases from Lake Okeechobee. The reservoir will be designed for water supply benefits, some flood attenuation, to provide environmental water supply deliveries to the Caloosahatchee Estuary, and water quality benefits to reduce salinity and nutrient impacts of runoff to the estuary. It is assumed that, depending upon the location of the reservoir and pollutant loading conditions in the watershed, the reservoir could be designed to achieve significant water quality improvements, consistent with appropriate pollution load reduction targets. Excess runoff from the C-43 basin and Lake Okeechobee flood control discharges will be pumped into the proposed reservoir.

Lake Okeechobee will meet any estuarine demands, not met by basin runoff as long as the lake stage is above a pre-determined level. Lake water will also be used to meet the remaining basin demands subject to supply-side management. The C-43 reservoir will also be operated in conjunction with the Caloosahatchee back-pumping project, which includes a stormwater treatment area for water quality treatment. If the level of water in the reservoir exceeds 6.5 feet and Lake Okeechobee is below a pre-determined level, then water is released and sent to the back-pumping facility.

Documents: Project Management Plan February 2002 (Final)

FY2006 Status: The C-43 Basin Storage Reservoir – Part 1 project above-ground reservoir is being designed and constructed under the Acceler8 initiative.

C-111 Spreader Canal

<u>Project Mission:</u>	Construct stormwater treatment area and pump station, extend a spreader canal by two miles, and add culverts and other features.
<u>Project Benefits:</u>	Improve health and water quality of southern Everglades wetlands by restoring more natural overland sheetflow.
<u>Component:</u>	WW
<u>Authorization:</u>	WRDA 2000
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	<p>The current plan will alter the 1994 design for the C-111 project by adding the following enhancements: constructing a 3,200-acre stormwater treatment area; enlarging pump station S-332E from 50 cubic feet per second (cfs) to 500 cfs; extending the spreader canal approximately two miles under U.S. Highway 1 and Card Sound Road to the Model Lands; and installing culverts under U.S. Highway 1 and Card Sound Road.</p> <p>The project also will fill in the southern reach of the C-111 canal below C-111 Spreader to S-197, remove S-18C and S-197, and backfill C-110. The project purposes are re-hydrate the Model Lands, establish sheet flow and hydropatterns that will sustain ecosystems in the Southern Glades and Model lands, provide more natural sheet flow to Florida Bay by eliminating point sources of freshwater discharges through C-111 to the estuarine systems of Manatee Bay and Barnes Sound, and maintain some level of flood protection for agricultural and urban areas in the project area.</p>
<u>Documents:</u>	PMP April 15, 2002 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_29_c111_spreader.cfm .)
<u>FY2006 Status:</u>	The PDT is developing three alternatives for modeling, evaluation, benefits calculation, and comparison. Schedule slippage for development of the PIR resulted from release of the USACE's modeling contractor. The USACE's ModBranch Model now will be used for benefit calculation and the District's LECsR model will be applied to evaluate impacts on existing legal water users. This project is included in the District's Acceler8 initiative, with construction scheduled to begin in November 2007.

Caloosahatchee Backpumping with Stormwater Treatment

<u>Component:</u>	DDD
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	This project includes pump stations and a stormwater treatment area with a total capacity of approximately 20,000 ac-ft located in the C-43 basin in Hendry and Glades counties. The initial design of the stormwater treatment area assumed 5,000 acres with the water level fluctuating up to 4 feet above grade. The final size, depth, and configuration of this facility will be determined through more detailed planning and design.

The purpose of this feature is to capture excess C-43 basin runoff, which will be used to augment regional system water supply. Backpumping will only occur after estuary and agricultural/urban demands have been met in the basin and when water levels in the C-43 storage reservoir exceed 6.5 feet above grade. Further, Lake Okeechobee water levels must be within a specified range to accept this water so as to not impact ecological resources. When these conditions are met, a series of pump stations will back-pump excess water from the reservoir and the C-43 basin to Lake Okeechobee after treatment through a stormwater treatment area.

The stormwater treatment area will be designed to meet Lake Okeechobee phosphorus and other pollutant loading reduction targets consistent with the Surface Water Improvement and Management Plan for the lake and future appropriate pollution load reduction targets which may be developed for the lake and the watershed in which the facility is to be located.

Documents: None

FY2006 Status: This project has not started.

Central Lake Belt Storage Area

Component: S

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes pumps, water control structures, a stormwater treatment area, and a combination above ground and in-ground storage reservoir with a total storage capacity of approximately 190,000 ac-ft located in Miami-Dade County. The initial design of the reservoir assumed 5,200 acres with water levels fluctuating from 16 feet above grade to 20 feet below grade. A subterranean seepage barrier will be constructed around the perimeter to enable drawdown during dry periods and to prevent seepage losses.

A pilot test of this technology will be conducted prior to final design of this component to determine construction technologies, storage efficiencies, impacts upon local hydrology, and water quality effects. Since this facility is to be located within the protection area of Miami-Dade County's Northwest Wellfield, the pilot test will also be designed to identify and address potential impacts to the County's wellfield which may occur during construction and/or operation. The stormwater treatment area was assumed to be 640 acres with the water level fluctuating up to 4 feet above grade. The final size, depth, and configuration of these facilities will be determined through more detailed planning and design.

The purpose of the project is to store excess water from WCA-2 and WCA-3 and provide environmental water supply deliveries to (1) Northeast Shark River Slough, (2) WCA-3B, and (3) to Biscayne Bay, in that order, if available. Due to the source of the water (WCA-2 and WCA-3), it is assumed that water stored in this facility is of adequate quality to return to the Everglades Protection Area and Biscayne Bay; however, the final size, depth, and configuration of these facilities,

including treatment requirements, will be determined through more detailed planning and design.

Excess water from WCA-2 and WCA-3 will be diverted into the L-37, L-33, and L-30 borrow canals, which run along the eastern boundaries of the Water Conservation Areas, and pumped into the Central Lake Belt Storage Area. Water supply deliveries will be pumped through a stormwater treatment area prior to discharge to the Everglades via the L-30 borrow canal and a reconfigured L-31N borrow canal. If available, deliveries will be directed to Biscayne Bay through the Snapper Creek Canal at Florida's Turnpike. A structure will be provided on the Snapper Creek Canal to provide regional system deliveries when water from the Central Lake Belt Storage Area is not available.

Documents: None

FY2006 Status: This project has not started.

Everglades Agricultural Area Storage Reservoirs – Phase 1

Project Mission: This plan is designed to capture, store and redistribute freshwater previously lost to tide and to regulate the quantity, timing, and distribution of water for environmental deliveries.

Project Benefits: Reduction of Lake Okeechobee flood control releases to the St. Lucie and Caloosahatchee estuaries, improve timing of environmental water deliveries to the WCAs including reducing damaging flood releases from the EAA to the WCAs and backpumping to Lake Okeechobee, and to provide an alternate source of water (currently the primary source is Lake Okeechobee) to meet agricultural irrigation demands.

Component: G Part 1

Authorization: WRDA 2000

Local Sponsor: South Florida Water Management District

Description: This project is located in the EAA in western Palm Beach County and Hendry County on lands purchased with Department of Interior Farm Bill funds, with SFWMD funds, and on lands gained through a series of exchanges for lands being purchased with these funds. The area presently consists of land that is mostly under sugar cane cultivation. Implementation of this project will be consistent with the Farm Bill land acquisition agreements.

The project will provide 360,000 ac-ft of above-ground storage volume, and consists of two cells (Cell 1 and Cell 2, approximately 17,000 and 14,000 acres in size, respectively) each with a 12 foot storage depth. Features of the selected plan include reservoirs with associated embankments, canals, pump stations, water control structures, and environmentally responsible design features to provide fish and wildlife habitat such as buffer area, littoral area, and deep-water refugia. The selected plan also includes canal conveyance improvements for the existing Miami, North New River, and the Bolles and Cross Canals of the C&SF project and a stormwater treatment area.

The reservoirs and stormwater treatment area would contribute to Everglades restoration by improving the quantity, quality, timing and

distribution of water within the greater Everglades. The project will benefit Lake Okeechobee, St. Lucie and Caloosahatchee estuaries, WCAs, and Everglades National Park. Additionally, the plan will have localized benefits include wetlands, deep water refugia, and terrestrial habitat.

Documents: PMP January 2002 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_08_eaa_store.cfm.)

PIR February 2006 (The Revised Draft PIR can be found online at http://www.evergladesplan.org/pm/projects/docs_08_eaa_phase_1_pir.cfm.)

FY2006 Status: The Revised Draft PIR was posted for Public Review in February 2006. This project is included in the District's Acceler8 undertaking, which will result in starting the initial construction phase in 2006; completion is scheduled for 2009, three years ahead of schedule.

Everglades Agricultural Area Storage Reservoirs – Phase 2

Component: G Part 2

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project is the second part of the EAA Storage Reservoir component. It includes an above-ground reservoir with a total storage capacity of approximately 120,000 ac-ft located in the EAA in western Palm Beach County.

The initial design for the reservoir assumed 20,000 acres, which would make-up the third compartment of the storage the EAA reservoir, with water levels fluctuating up to 6 feet above grade. The need for this compartment will be determined through more detailed planning and design after Phase 1 is completed.

The purpose of this project is to further improve the timing of environmental deliveries to the WCAs, including reducing damaging flood releases from the EAA to the WCAs and reducing Lake Okeechobee regulatory releases to the estuaries. This last increment of storage would be used to meet environmental demands as a priority. The sources of water for this reservoir are overflow from the Phase 1 reservoirs and Lake Okeechobee regulatory releases only during extreme wet events.

This project will be operated as a dry storage reservoir and discharges made down to 18 inches below ground level. The project can also be designed to provide a water quality treatment function, augmenting the performance of the Everglades Construction Project and ensuring protection of water quality in the Everglades Protection Area.

Design of this project for water quality performance will be based on water quality targets for the Everglades Construction Project and other water quality targets developed to protect designated uses in EAA waters.

Documents: None

FY2006 Status: This project has not started.

Everglades National Park Seepage Management

<u>Component:</u>	V, FF, and U
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	South Florida Water Management District
<u>Description:</u>	This project includes three CERP Components: L-31N Improvements for Seepage Management, S-356 Structures, and Bird Drive Recharge Area.

The L-31N Levee Seepage Improvements includes relocating and enhancing L-31N, groundwater wells, and sheetflow delivery system adjacent to Everglades National Park located in Miami-Dade County. More detailed planning, design and pilot studies will be conducted to determine the appropriate technology to control seepage from Everglades National Park. These studies and tests will also determine the appropriate amount of wet season groundwater flow control that will minimize potential impacts to Miami-Dade County's West Wellfield and freshwater flows to Biscayne Bay. The purpose of this project is to improve water deliveries to Northeast Shark River Slough and restore wetland hydropatterns in Everglades National Park by reducing levee and groundwater seepage and increasing sheetflow.

This project reduces levee seepage flow across L-31N adjacent to Everglades National Park via a levee cutoff wall. Groundwater flows during the wet season are captured by ground water wells adjacent to L-31N and pumped back to Everglades National Park. Water from upstream natural areas will be diverted into a buffer area adjacent to Everglades National Park where sheetflow will be reestablished. Further, this project will include the relocation of the Modified Water Deliveries structure S-356 to provide more effective water deliveries to Everglades National Park. New discharges to Everglades National Park will be designed to meet applicable water quality criteria.

The Bird Drive Recharge Area component includes pumps, water control structures, canals, and an above ground recharge area with a total storage capacity of approximately 11,500 ac-ft located in western Miami-Dade County. The initial design of the recharge facility assumed 2,877 acres with the water level fluctuating up to 4 feet above grade. Final design will seek to enhance and maintain the continued viability of wetlands within the basin. The final size, depth, and configuration of these facilities including treatment requirements will be determined through more detailed planning and design.

The purpose of the Bird Drive Recharge Area is to recharge groundwater and reduce seepage from the Everglades National Park buffer area by increasing water table elevations east of Krome Avenue. The facility will also provide C-4 flood peak attenuation and water supply deliveries to the South Dade Conveyance System and Northeast Shark River Slough. Inflows from the western C-4 Canal basin and from the proposed West Miami-Dade Wastewater Treatment Plant will be pumped into the Recharge Area. Inflows from the wastewater treatment plant will stop when the Recharge Area depth exceeds three feet above ground and will be diverted to a deep well injection disposal system.

Recharge area outflows will be prioritized to meet groundwater recharge demands, South Dade Conveyance System demands, and Northeast Shark River Slough demands when supply is available. Regional system deliveries will be routed through the seepage collection canal system of the Bird Drive Recharge Area to the South Dade Conveyance system.

Documents: PMP October 2005 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_27_enp_sm.cfm.)

FY2006 Status: In December 2005, the ENP Seepage Management PMP was approved and the PIR phase commenced. During the current PIR phase, alternative plans will be formulated, screened and evaluated to meet CERP objectives.

Florida Keys Tidal Restoration

Component: OPE

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes the use of bridges or culverts to restore the tidal connection between Florida Bay and the Atlantic Ocean in Monroe County. The four locations are as follows:

- Tarpon Creek, just south of Mile Marker 54 on Fat Deer Key (width 150 feet)
- Unnamed creek between Fat Deer Key and Long Point Key, south of Mile Marker 56 (width 450 feet)
- Tidal connection adjacent to Little Crawl Key (width 300 feet)
- Tidal connection between Florida Bay and Atlantic Ocean at Mile Marker 57 (width 2,400 feet)

The unnamed creek between Fat Deer Key and Long Point Key was selected as the project's initial restoration area, per the site selection matrix. Work is currently underway to locate an area for fill removal as well as working out the details with Navigational Servitude.

The purpose of this project is to restore the tidal connection that was eliminated in the early 1900s during the construction of Flagler's railroad. Restoring the circulation to areas of surface water that have been impeded and stagnant for decades will significantly improve water quality, benthic floral and faunal communities, larval distribution of both recreational and commercial species (i.e., spiny lobster), and the overall hydrology of Florida Bay.

Documents: PMP April 2002 (The Final PMP can be viewed online at http://www.evergladesplan.org/pm/pmp/pmp_31_fl_keys_tidal.cfm.)

FY2006 Status: With the exception of the baseline monitoring collection effort, this project was placed on hold during FY2004. All other work on delivery of PIR products has been halted since that time at the direction of the USACE.

Flow to Eastern WCA

Component: EEE

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: The purpose of this project is to attenuate high stages in WCA-2 and WCA-3 and transport this excess water to Central Lake Belt Storage Area where it will be stored to meet downstream demands in WCA-3B.

Documents: None

FY2006 Status: This project is not currently authorized.

Flow to Northwest and Central WCA-3A

Component: II and RR

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes relocation and modifications to pump stations and development of a spreader canal system located in the northwest corner and west-central portions of WCA-3A in western Broward County.

 The purpose of this project is to increase environmental water supply availability, increase depths and extend wetland hydropatterns in the northwest corner and west-central portions of WCA-3A. Additional flows will be directed to the northwest corner and west central portions of WCA-3A by increasing the capacity of the G-404 pump station and increasing the capacity and relocating the S-140 pump station. A spreader canal system at S-140 will reestablish sheetflow to the west-central portion of WCA-3A.

 Water quality treatment of flows is assumed to be provided by the Everglades Construction Project and water quality treatment strategies developed to fulfill the Non-Everglades Construction Project requirements of the Everglades Forever Act. If additional treatment were determined to be required as a result of future detailed planning and design work, those existing facilities would be modified to provide the necessary treatment.

Documents: None

FY2006 Status: The PMP was initiated in October 2002, but was stopped in March 2003 and has remained on hold since then. This project is not currently authorized.

Hillsboro ASR – Part 2

Component: M Part 2

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes a series of aquifer storage and recovery wells with a total capacity of approximately 150 million gallons per day and associated pre- and post- water quality treatment which will be located

adjacent to the reservoir or along the Hillsboro Canal. The initial design of the aquifer storage and recovery facility assumed 30 well clusters, each with a capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post treatment. The source of water to be injected is in the surficial ground water adjacent to the reservoir. The location, extent of treatment, and final number of the aquifer storage and recovery wells may be modified based on findings from a proposed aquifer storage and recovery pilot project.

The purpose of this project is to supplement water deliveries to the Hillsboro Canal during dry periods thereby reducing demands on Lake Okeechobee and the Loxahatchee National Wildlife Refuge. Water will be pumped into the aquifer during the wet season or periods when excess water is available. Water will be released back to the reservoir or Hillsboro Canal to help maintain canal stages during the dry season.

Documents: None

FY2006 Status: This project has not started and is not currently authorized.

Indian River Lagoon - South

Project Mission: Construct reservoirs, stormwater treatment areas, acquire land, and remove sediment.

Project Benefits: Restore the southern Indian River Lagoon watershed, a part of the most diverse estuary in the United States. The southern lagoon and its watershed have been negatively affected over the past 100 years by the construction of canals discharging directly into the lagoon, changed water flow patterns, and stormwater runoff.

This project will restore the southern Indian River Lagoon and St. Lucie Estuary and its associated watershed. This will be accomplished by reducing canal discharge, storing more water on land, returning a more natural water flow to the lagoon and estuary, removing 7.9 million cubic yards of muck, and restoring upland areas including the Allapattah Natural Storage Area. Water quality, plant and animal habitat, and estuary nursery conditions all will improve.

Component: B and UU

Authorization: C-44 – WRDA 2000; Remainder Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: The Indian River Lagoon is the most biodiverse estuarine system in all of North America. The Final Feasibility Study for the Indian River Lagoon-South project recommends a plan in Martin, St. Lucie, and Okeechobee counties that will improve water quality within the St. Lucie Estuary and the Indian River Lagoon by reducing the damaging effects of watershed runoff, reducing high peak freshwater discharges to control salinity levels, and reducing nutrient loads, pesticides and other pollutants. The project will also provide water supply for agriculture to offset reliance on the Floridian Aquifer System.

The plan includes 170,000 acre feet of storage in reservoirs (C-44, C-23 and 24 North and South Reservoirs and C-25 Reservoir) and stormwater treatment areas (C-44, C-23, C-24, and C-25), provides storage on

92,000 acres of natural storage areas (Allapattah, Pal Mar, and Cypress Creek), and removes 7,900,000 cubic yards of muck from the St. Lucie River and Estuary.

C-44 Reservoir, the C-44 East STA, the C-44 West STA. The C-44 Reservoir and STAs replace the original C-44 Reservoir, C-44 West STA, C-44 East STA, and C-23/44 STA from the Indian River Lagoon South Feasibility Study. All component features associated with those components, including real estate, are no longer applicable. The features of the new C-44 components are explained below. Some structure numbers used for the C-44 component features in the feasibility study are used for similar features in the new components, however they are not the same structures.

The new C-44 reservoir and STAs include a 3,315-acre, 10-foot deep aboveground reservoir, a 3,000-acre STA to the west, and a 3,000-acre STA to the east. The C-44 reservoir and STAs are located in Martin County adjacent to and north of C-44 canal, and approximately midway between Lake Okeechobee and the Florida Turnpike.

C-23/24 Basins. The recommended plan includes five components within the C-23/24 basin. These components are the C-23/24 North Reservoir, C-23/24 South Reservoir, C-23/24 Stormwater Treatment Area, Cypress Creek Complex – Natural Storage and Water Quality Treatment Area, and Allapattah Complex – Natural Storage and Water Quality Treatment Area.

An operational feature of the Indian River Lagoon – South Plan known as the northern and southern diversions are accomplished via use of the construction features described for this basin. The Allapattah – Natural Storage and Water Quality Treatment Area are located in Martin County. The balance of the C-23/24 basin features are located in St. Lucie and Okeechobee counties.

C-25 and Northfork and Southfork Basins. The recommended plan includes three components within the C-25 basin and North Fork and South Fork basins of the St. Lucie River. These components include the C-25 Reservoir and Stormwater Treatment Area, Muck Remediation, Artificial Habitat, and North Fork Floodplain Restoration.

Final Project Implementation Report and Supplemental Environmental Impact Statement. This Report (http://www.evergladesplan.org/pm/studies/irl_south_pir.cfm) addresses the requirements of Section 601 of the WRDA 2000 (<http://www.evergladesplan.org/wrda2000/wrda.cfm>) and addresses USACE Headquarters policy compliance review comments on the Final Feasibility Report that was completed in August 2002. This final report replaces the Final Feasibility Report from August 2002.

This revision/supplement includes revised Sections and Appendices of the Final Feasibility Report and an EIS as well as new Appendices. This report replaces the Final Integrated Feasibility Report and Supplemental FEIS. Click here to view and download the results of the Independent Scientific Review panel on the Indian River Lagoon – South PIR (<http://www.evergladesplan.org/pm/studies/report#report>).

- Documents: PMP July 2004 (The Final PMP - Updated can be found online at http://www.evergladesplan.org/pm/pmp/pmp_07_irl_south.cfm.)
- PIR March 2004 (The Final PIR can be found online at http://www.evergladesplan.org/pm/studies/irl_south_pir.cfm.)
- FY2006 Status: The PIR is complete and awaiting a WRDA authorization. The C-44 reservoir and STA design are proceeding under the Acceler8 initiative, with test cell construction completed during FY2006, and construction of the reservoir and STA to start in FY2007.

Lake Istokpoga Regulation Schedule

- FY2006 Status: This project was incorporated into the Lake Okeechobee Watershed Project, which will enable efficient consideration of operational and structural solutions to address water resources issues in both lakes.

Lake Okeechobee ASR

- Component: GG
- Authorization: WRDA 1999
- Local Sponsor: South Florida Water Management District
- Description: This project includes a series of ASR wells adjacent to Lake Okeechobee with a total capacity of 1 billion gallons per day and associated pre- and post-water quality treatment in Glades and Okeechobee Counties. The initial design assumes 200 wells, each with the capacity of 5 million gallons per day with eight ultra-filtration water quality pre-treatment facilities and aeration for post-treatment.
- Based on information from existing aquifer storage and recovery facilities studied, it is assumed that recovery of aquifer-stored water would have no adverse effects on water quality conditions in Lake Okeechobee. In fact, some level of nutrient load reduction may occur as a result of aquifer storage, which would be a long-term benefit to in-lake water quality conditions.
- The level and extent of treatment and number of the aquifer storage and recovery wells may be modified based on findings from the Lake Okeechobee Aquifer Storage and Recovery Pilot Project. The pilot project will also investigate changes to water chemistry resulting from aquifer storage and identify post-retrieval water quality treatment requirements, if any, necessary to implement aquifer storage and recovery facilities.
- The CERP includes pilot studies to investigate the feasibility of the aquifer storage and recovery facilities, including water quality changes associated with aquifer storage and recovery.
- The purpose of this project is to provide additional regional storage while reducing both evaporation losses and the amount of land removed from current land use (e.g., agriculture) that would normally be associated with construction and operation of above-ground storage reservoirs. This project will increase the lake's water storage capability to better meet regional water supply demands for agriculture, Lower East Coast urban areas and the Everglades. This project will help to manage a portion of

regulatory releases from the lake primarily to improve Everglades hydropatterns and to meet supplemental water supply demands of the Lower East Coast. Further, this project will reduce harmful regulatory discharges to the St. Lucie and Caloosahatchee estuaries and maintain and enhance the existing level of flood protection.

The operation of this project assumes that after treatment, water from Lake Okeechobee will be injected into the upper Floridan Aquifer System when the climate-based inflow model forecasts that the lake water level will rise significantly above those levels that are desirable for the Lake littoral zone. During the dry season, water stored in the Floridan Aquifer System will be returned to the lake after aeration either when the lake water level is projected to fall to within three quarters of a foot of the supply-side management line or below an established water level during the dry season.

Documents: None

FY2006 Status: This project has not started.

Lake Okeechobee Watershed

Project Mission: Construct two reservoirs and stormwater treatment area, and remove 150 tons of phosphorus.

Project Benefits: Provide better management of lake water levels, improve lake water quality, reduce damaging releases to the estuaries, restore isolated wetlands in the watershed, and resolve water resource problems in Lake Istokpoga.

Component: A, W, LOWQTF, and LOTSD

Authorization: Taylor Creek/Nubbin Slough STA – WRDA 2000
Remainder Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: The purposes of this project are to reduce phosphorus loading to Lake Okeechobee; attenuate peak flows from the watershed; provide more natural water level fluctuations in the lake; and restore wetland habitat. These goals will be accomplished by a 17,500 acre reservoir in the lower Kissimmee basin; a 5,000 acre reservoir and a 5,000 STA in the Taylor Creek/Nubbin Slough basin; smaller Reservoir Assisted STAs (RASTAs) and restoration of isolated wetlands; and removal of 150 tons of phosphorus from 10 miles of primary tributary canals.

As a first step in development of the PIR, a Watershed Assessment Report was prepared in June 2003 to better define water quality and hydrologic problems in the watershed (minimal monitoring existing in area). The Taylor Creek/Nubbin Slough RASTA was authorized as one of the ten initial projects in WRDA 2000. The Lake Okeechobee Tributary Sediment Dredging Project is included in the programmatic authorization for implementation of projects with a total project cost under \$25 million. The other projects will be authorized in future WRDAs.

Documents: None

FY2006 Status: A revised final array of three alternatives is being modeled and awaiting a revised RECOVER Assessment. Once these are complete, the array will be assessed against the performance measures to choose the Tentatively Selected Plan. The Alternative Formulation Briefing is scheduled to be held in September 2006.

Loxahatchee National Wildlife Refuge Internal Canal Structures

Component: KK

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes two water control structures in the northern ends of the perimeter canals encircling the Loxahatchee National Wildlife Refuge (the Refuge) (WCA-1) located in Palm Beach County. The purpose of this project is to improve the timing and location of water depths within the Refuge. It is assumed that these structures will remain closed except to pass STA-1 East and STA-1 West outflows and water supply deliveries to the coastal canals.

Documents: None

FY2006 Status: This project has not started and is not currently authorized.

Melaleuca Eradication and Other Exotic Plants

Project Mission: Develop natural weapons to reduce spread of unwanted plants, and develop a report describing further federal involvement in the fight against exotic plants in South Florida.

Project Benefits: Reduce melaleuca and other unwanted plants that are flourishing throughout the greater Everglades ecosystem.

Component: OPE

Authorization: Not Currently Authorized.

Local Sponsor: South Florida Water Management District

Description: The Melaleuca Eradication and Other Exotic Plants project is a two-part plan to enhance efforts to control invasive exotic plant species in south Florida. The two parts include (1) mass rearing and controlled release of biological agents throughout South Florida and (2) preparation of a report to further identify the overall problem with exotic invasive plants and provide a recommendation regarding further federal involvement.

Documents: Project Management Plan September 2004 ([PMP - Final](#))

FY2006 Status: Development of the PIR is in underway and on schedule. The Feasibility Scoping Meeting is being scheduled by the USACE. A special report on the invasive species problem has been forwarded to the USACE Division and headquarters for review. The PMP for the Invasive Species Master Plan (all taxa) is being prepared and a team assembled.

Modify Holey Land Wildlife Management Area Operation Plan

Component: DDD

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project consists of a modification to the current operating plan for Holey Land Wildlife Management Area to implement rain-driven operations for this area. Water deliveries are made to Holey Land from the Rotenberger Wildlife Management Area or from STA-3 and STA-4 if Rotenberger flows are insufficient and the water quality of the deliveries are assumed to be acceptable. These new operational rules are intended to improve the timing and location of water depths within the Holey Land Wildlife Management Area.

Documents: None

FY2006 Status: This project has not started and is not currently authorized.

Modify Rotenberger Wildlife Management Area Operation Plan

Project Mission: Modify current operational plan to provide more rainfall-driven water deliveries.

Project Benefits: Restore more natural water depths to improve plant and animal habitat and the overall ecology of this wildlife area.

Component: EE

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project consists of a modification to the current operating plan for Rotenberger Wildlife Management Area to implement rain-driven operations for this area. Water deliveries are made to the Rotenberger Wildlife Management Area from STA-5. Discharges from the Rotenberger Wildlife Management Area are made to the Holey Land Wildlife Management Area. The deliveries are assumed to be of acceptable water quality. These new operational rules are intended to improve the timing and location of water depths within the Rotenberger Wildlife Management Area.

Documents: None

FY2005 Status: This project has not started and is not currently authorized.

North Lake Belt Storage Area

Component: XX Part 2

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes canals, pumps, water control structures, and an in-ground storage reservoir with a total capacity of approximately 90,000 ac-ft located in Miami-Dade County.

The initial design of the reservoir assumed 4,500 acres with water levels fluctuating from ground level to 20 feet below grade. A subterranean seepage barrier will be constructed around the perimeter to enable drawdown during dry periods, to prevent seepage losses, and to prevent water quality impact due to the high transmissivity of the Biscayne Aquifer in the area. The reservoir will be located within an area proposed for rock mining. A pilot test of this component will be conducted prior to final design to determine construction technologies, storage efficiencies, impacts upon local hydrology, and water quality effects.

The water quality assessment will include a determination as to whether the in-ground reservoir with perimeter seepage barrier will allow storage of untreated runoff. The final size, depth and configuration of these facilities including treatment facilities will be determined through more detailed planning and design.

The purpose of this project is to capture and store a portion of the stormwater runoff from the C-6, Western C-11, and C-9 basins. The stored water will be used to maintain stages during the dry season in the C-9, C-6, C-7, C-4, and C-2 Canals and to provide water deliveries to Biscayne Bay to aid in meeting salinity targets. Runoff is pumped and gravity fed into the in-ground reservoir from the C-6 (west of Florida's Turnpike), Western C-11, and C-9 basins. Outflows from the facility will be directed into the C-9 Stormwater Treatment Area/Impoundment for treatment prior to delivery to the C-9, C-7, C-6, C-4, and C-2 Canals. If necessary, additional stormwater treatment areas will be constructed adjacent to the in-ground reservoir.

Documents: None

FY2006 Status: This project has not started and is not currently authorized.

North Palm Beach County – Part 1

Project Mission: Construct structures and other features and widen a canal

Project Benefits: Increase water supplies to the Grassy Waters Preserve and Loxahatchee Slough; enhance water timing, flow and depth in the slough; increase flows to the Northwest Fork of the Loxahatchee River; and reduce high discharges to the Lake Worth Lagoon.

Component: X, Y, GGG, Pal Mar, LWL, and K Par

Authorization: Not Currently Authorized.

Local Sponsor: South Florida Water Management District.

Description: This project includes six separable elements including Pal Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration, L-8 Basin Modifications, C-51 and L-8 Reservoir, Lake Worth Lagoon Restoration, C-17 Backpumping and Treatment, and C-51 Backpumping and Treatment. These separable elements have been combined into a single project to address the interdependencies and tradeoffs between the different elements and provide a more efficient and effective design of the overall project.

Pal Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration Other Project Element (OPE). This separable element

will consider improvements such as new or modified water control structures, canal modifications and the acquisition of 3,000 acres located between Pal Mar and the J.W. Corbett Wildlife Management Area in Palm Beach County.

The purpose of this separable element, described in the CERP, is to provide hydrologic connections between the J. W. Corbett Wildlife Management Area and (1) the Moss Property, (2) the C-18 Canal, (3) the Indian Trail Improvement District, and (4) the L-8 Borrow Canal, in addition to extending the spatial extent of protected natural areas. These connections would reduce detrimental effects due to over inundation on native vegetation frequently experienced during the wet season and extend the footprint of the contiguous greenbelt to 126,000 acres. This greenbelt extends from the Dupuis Reserve near Lake Okeechobee across the J.W. Corbett Wildlife Management Area and south to Jonathan Dickinson State Park.

L-8 Basin Modifications (K - Part 1). This separable element involves modifications to the L-8 basin including a series of pumps, water control structures, and canal capacity improvements in the M canal. The purpose of this project is to construct the required conveyance to make the C-51 and L-8 Reservoir (see below) functional and thereby increase water supply availability while maintaining or enhancing flood protection for northern Palm Beach County areas. This component will also provide conveyances necessary to deliver flows required to enhance hydroperiods in the Loxahatchee Slough; increase base flows to the Northwest Fork of the Loxahatchee River; and reduce high discharges to the Lake Worth Lagoon.

C-51 and L-8 Reservoir (GGG). This separable element includes a combination above ground and in-ground reservoir with a total storage capacity of approximately 48,000 ac-ft located immediately west of the L-8 Borrow Canal and north of the C-51 Canal in Palm Beach County. The initial design for the reservoir assumed a 1,800-acre reservoir with 1,200 usable acres with the water level fluctuating from 10 feet above grade to 30 feet below grade. The final size, depth, and configuration of this facility will be determined through more detailed planning and design.

The purpose of this project is to increase water supply availability, and attenuate discharge to the Lake Worth Lagoon and provide ancillary drainage benefits for northern Palm Beach County areas. It will also provide flows to enhance hydroperiods in the Loxahatchee Slough; increase base flows to the Northwest Fork of the Loxahatchee River, and reduces high discharges to the Lake Worth Lagoon. Water will be pumped into the reservoir from the C-51 Canal and Southern L-8 Borrow Canal during the wet season, or periods when excess water is available, and returned to the C-51 and L-8 during dry periods. Additional projects will also direct excess water into the West Palm Beach Water Catchment Area (also known as the Grassy Waters Preserve). This component or portions of this component may be implemented under a previous authorization.

Lake Worth Lagoon Restoration (OPE). This project includes sediment removal in the C-51 Canal and sediment removal or capping within a distance of 2.5 miles downstream of the confluence of the C-51 Canal and the Lake Worth Lagoon. A prototype project will be conducted to determine the feasibility and potential cost of removing and disposing of sediments in the lagoon versus capping them. This project includes the evaluation of sediment traps to reduce future accumulation of sediment.

The purpose of this project is to improve water quality and allow for the reestablishment of sea grasses and benthic communities. The elimination of the organically enriched sediment from the C-51 Canal discharge will provide for long-term improvements to the lagoon and enable success for additional habitat restoration and enhancement projects planned by Palm Beach County.

C-17 Backpumping and Treatment (X). This project includes backpumping facilities and a stormwater treatment area with a total storage capacity of approximately 2,200 ac-ft located in northeastern Palm Beach County. The design assumes a 550-acre STA with the water level fluctuating up to 4 feet above grade. The final size, depth, and configuration of this facility will be determined through more detailed planning and design, and will address appropriate pollution load reduction targets necessary to protect receiving waters (e.g., West Palm Beach Water Catchment Area).

The purpose of this project is to increase water supplies to the West Palm Beach Water Catchment Area and Loxahatchee Slough by capturing and storing excess flows currently discharged to the Lake Worth Lagoon from the C-17 Canal. Excess C-17 Canal water will be backpumped through existing canals and proposed water control structures to the STA which will provide water quality treatment prior to discharge into the West Palm Beach Water Catchment Area.

C-51 Backpumping and Treatment (Y). This project includes backpumping facilities and an STA with a total storage capacity of approximately 2,400 ac-ft located in Palm Beach County. The design includes a 600-acre STA with the water level fluctuating up to 4 feet above grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design, and will address appropriate pollution load reduction targets necessary to protect receiving waters (e.g., West Palm Beach Water Catchment Area).

The purpose of this project is to increase water supplies to the West Palm Beach Water Catchment Area and Loxahatchee Slough by capturing and storing excess flows currently discharged to the Lake Worth Lagoon from the C-51 Canal. The conceptual design allows excess C-51 Canal water to be backpumped through existing and proposed water control structures and canals to the STA. The STA will provide water quality treatment prior to discharge into the West Palm Beach Water Catchment Area.

Documents:

PMP June 2005 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_17_npalmbeach_p1.cfm.)

FY2006 Status: While modeling of alternatives in the PIR development process is proceeding, the District is moving ahead with implementing several components or features of the project, including the G-161 Northlake Boulevard Structure, which is under construction and will restore the historic connection between the Grassy Waters Preserve and the Loxahatchee Slough and C-18 Canal. The District is proceeding with the L-8 Reservoir at the Palm Beach Aggregates site, which is currently under construction to store water discharged from the L-8 basin that is currently lost through the C-51 to the Lake Worth Lagoon to tide. The Lake Worth Lagoon Sediment Management effort is removing sediments from the C-51 bottom before they are discharged to the lagoon; beneficial uses are being found for this rich material.

North Palm Beach County – Part 2

Component: K Part 2 and LL

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes two separable elements. The C-51 Regional Groundwater ASR system and L-8 basin ASR system. These projects will provide additional long-term storage within the North Palm Beach County region.

C-51 Regional Groundwater Aquifer Storage and Recovery (LL).

This project includes a series of ASR wells with a total capacity of 170 million gallons per day, associated pre- and post-water quality treatment to be constructed along the C-51 Canal, and canals that can receive water from the C-51 Canal. The conceptual design assumes 34 well clusters, each with an individual capacity of 5 million gallons per day fed by a combination of vertical and horizontal wells located near existing canals. The conceptual design includes disinfection pre-treatment and post storage aeration. The level and extent of treatment and number of the ASR wells may be modified based on findings from a proposed ASR pilot project.

The purpose of this project is to capture and store excess flows from the C-51 Canal, currently discharged to the Lake Worth Lagoon, for later use during dry periods. The ASR facilities will be used to inject and store surficial aquifer ground water adjacent to the C-51 Canal into the upper Floridan Aquifer instead of discharging the canal water to tide. Water will be returned to the C-51 Canal to help maintain canal stages during the dry season. If water is not available in the ASR system, existing rules for water delivery to this region will be applied.

L-8 Basin ASR (K - Part 2). This separable element includes ASR wells with a total capacity of 50 million gallons per day and associated pre- and post-water quality treatment to be constructed within the L-8 basin or along the City of West Palm Beach water supply conveyance and storage system or a combination of both. The conceptual design consists of 10 wells, each with an individual capacity of 5 million gallons per day for a total capacity of 50 million gallons per day. The conceptual design includes disinfection pre-treatment and post storage aeration. The level

and extent of treatment and number of the ASR wells may be modified based on findings from a proposed ASR pilot project.

The purpose of this project is to increase water supply availability and moderate water level within the West Palm Beach Water Catchment Area. It will also provide flows to enhance hydroperiods in the Loxahatchee Slough; increase base flows to the Northwest Fork of the Loxahatchee River, and reduces high discharges to the Lake Worth Lagoon. During periods when the West Palm Beach Water Catchment Area is above desirable stages, 50 million gallons per day will be diverted for storage in the ASR wells.

Documents: None

FY2006 Status: This project has not started and is not currently authorized.

Palm Beach County Agricultural Reserve Reservoir – Part 2

Component: W Part 2

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes ASR wells with a total capacity of 75 million gallons per day and associated pre- and post- water quality treatment located adjacent to the reservoir. The initial design of the wells assumed 15 well clusters, each with a capacity of 5 million gallons per day as well as chlorination for pre-treatment and aeration for post-treatment.

The source of water to be injected is surficial ground water adjacent to the Palm Beach County Agricultural Reserve Reservoir. The level and extent of treatment and number of the aquifer storage and recovery wells may be modified based on findings from a proposed aquifer storage and recovery pilot project.

The purpose of this project is to supplement water supply deliveries for central and southern Palm Beach County by capturing and storing excess water currently discharged to the Lake Worth Lagoon. These supplemental deliveries will reduce demands on Lake Okeechobee and the Loxahatchee National Wildlife Area. The wells will pump water into the aquifer during the wet season and will pump water from the aquifer to the Lake Worth Drainage District canals to help maintain canal stages during the dry season. If water is not available in the aquifer storage and recovery wells, existing rules for water delivery to this region will be applied.

Documents: None

FY2006 Status: This project has not started and is not currently authorized.

Palm Beach County Agriculture Reserve Reservoir - Part 1

Project Mission: Construct an above-ground reservoir

Project Benefits: Supplement water supply deliveries for central and southern Palm Beach County, and reduce demands on Lake Okeechobee and the Loxahatchee National Wildlife Area

Component: W Part 1

Authorization: Not currently authorized

Local Sponsor: South Florida Water Management District

Description: This project includes an above ground reservoir with a total storage capacity of approximately 20,000 ac-ft located in the western portion of the Palm Beach County Agricultural Reserve. The initial design for the reservoir assumed 1,660 acres with water levels fluctuating up to 12 feet above grade. The final size, depth and configuration of these facilities will be determined through more detailed planning and design. The purpose of this project is to supplement water supply deliveries for central and southern Palm Beach County by capturing and storing excess water currently discharged to the Lake Worth Lagoon. These supplemental deliveries will reduce demands on Lake Okeechobee and the Loxahatchee National Wildlife Area. It is assumed that this facility could also be designed to achieve water quality improvements in downstream receiving waters, depending upon pollutant loading conditions in the watershed. The reservoir will be filled during the wet season with excess water from the western portions of the Lake Worth Drainage District and possibly from Acme Basin B. Water will be returned to the Lake Worth Drainage District canals to help maintain canal stages during the dry season. If water is not available in the reservoir, existing rules for water delivery to this region will be applied.

FY2006 Status: This project is not currently authorized.

Picayune Strand (Southern Golden Gate Estates) Hydrologic Restoration

Project Mission: Construct spreader channels, canal plugs and pump stations, and remove roads

Project Benefits: Restore the natural hydrology of an 85-square-mile area in rural Collier County that was over drained in the early 1960s as part of a failed housing development. Removing roads, plugging canals, and adding other structural features will reduce fresh water drainage, elevate ground water levels, and replenish wetland habitat. This will restore hydrology, reduce exotic species, and improve downstream coastal estuaries.

Component: OPE

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project includes a combination of spreader channels, canal plugs, road removal and pump stations in the Western basin and Big Cypress, Collier County, south of I-75 and north of U.S. 41 between the Belle Meade Area and the Fakahatchee Strand State Preserve.

The purpose of this project is to restore and enhance the wetlands in Golden Gate Estates and in adjacent public lands by reducing over-drainage. Implementation of the restoration plan would also improve the water quality of coastal estuaries by moderating the large salinity fluctuations caused by freshwater point discharge of the Faka Union Canal.

Documents: PMP March 2001 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_30_sgge.cfm.)

Integrated PIR/EIS November 2004 (The Final PIR/EIS can be found at http://www.evergladesplan.org/pm/projects/docs_30_sgge_pir_final.cfm.)

FY2006 Status: The Final PIR was published in the Federal Register, and the Chief Engineer's Report was issued FY2005. The Assistant Secretary of the Army for Civil Works Report was submitted to Congress in FY2006. Although this CERP component requires congressional authorization for construction, engineering, and design, construction of Prairie Canal, and the Cultural Resource Survey are in progress under the Acceler8 initiative, and a Ten-Year Management Plan has been drafted. In July, the Senate approved a WRDA bill that included \$362 million for this project. The bill is expected to move to a conference committee, where differences between the House and Senate versions will be resolved.

Site 1 Impoundment (Fran Reich Preserve)

Project Mission: Construct reservoir and water conveyance features

Project Benefits: Store water that would otherwise flow to the Atlantic Ocean. Benefits include increased water supplies for the natural environment, people and farms; habitat restoration; improvements to Lake Okeechobee and the coastal estuaries; groundwater recharge; reduced saltwater intrusion; and decreased seepage out of the Everglades.

Component: M Part 1

Authorization: None

Local Sponsor: South Florida Water Management District

Description: The purpose of this project is to supplement water deliveries to the Hillsboro Canal by capturing and storing excess water currently discharged to the Intracoastal Waterway. These supplemental deliveries will reduce demands on Lake Okeechobee and the Loxahatchee National Wildlife Refuge. The impoundment pool will also provide groundwater recharge, reduce seepage from adjacent natural areas, and prevent saltwater intrusion by releasing impounded water back to the Hillsboro canal when conditions dictate. Some measure of flood protection may also be provided along with water quality improvements. This project includes canal and structure relocations, canal conveyance improvements, water control structures and an aboveground impoundment with a total storage capacity of approximately 13,280 ac-ft located in the Hillsboro Canal basin in southern Palm Beach County. The design of the impoundment includes two compartments totaling 1,660 acres with water levels fluctuating up to 8 feet above grade. North Springs Improvement District flows were redirected from WCA-3 northward via the L-36 Borrow Canal to the Hillsboro Canal where the volume can be pumped into the impoundment. The conveyance of the Hillsboro Canal was increased from the impoundment inflow structure east to the Lake Worth Drainage District E-1 canal to allow backpumping of additional flows from the western Hillsboro Canal basin. An ASR system within the impoundment was also modeled and proved to be beneficial for long-term storage and meeting water supply demands.

Documents: PMP November 2003 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_40_site_1.cfm.)

PIR/EA December 2005 (The Revised Draft PIR/EA can be found online at http://www.evergladesplan.org/pm/projects/docs_40_site_1_pir.cfm.)

FY2006 Status: PIR and NEPA activities continued on schedule during FY2006, and in June, the PIR was the first CERP PIR to be approved by the USACE's Civil Works Review Board. The Chief's Report is expected in August, and the Assistant Secretary of the Army for Civil Works Report Submittal to Congress is scheduled for November 2006. Engineering and design activities have progressed under the Acceler8 initiative, and construction is scheduled to begin in summer 2006.

Strazzulla Wetlands

Component: OPE

Authorization: Section 601(c)(3) of WRDA 2000 (Additional Program Authority)

Description: This separable element includes water control structures and the acquisition of 3,335 acres located in Palm Beach County. The purpose of this separable element is to provide a hydrological and ecological connection to the Loxahatchee National Wildlife Refuge and expand the spatial extent of protected natural areas.

This land will act as a buffer between higher water stages to the west and lands to the east that must be drained. This increase in spatial extent will provide vital habitat connectivity for species that require large unfragmented tracts of land for survival. It also contains the only remaining cypress habitat in the eastern Everglades and one of the few remaining sawgrass marshes adjacent to the coastal ridge. This is a unique and endangered habitat that must be protected. This area provides an essential Everglades landscape heterogeneity function.

Documents: None

FY2006 Status: This project was placed on hold in FY2005, and again in FY2006, due to high cultural resources costs with respect to the total project cost.

WCA-2B Flows to Everglades National Park

Component: S P1 and YY

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project is comprised of two components: WCA-2B Flows to Central Lake Belt Storage Area and Central Lake Belt Storage Area (L-30 partial).

The purpose of the first component is to attenuate high stages in WCA-2B and divert excess water primarily to Northeast Shark River Slough and eventually to Central Lake Belt Storage Area via pump station, culverts, canals such as L-33, L-35, and L-37 and conveyance features. A part of this component consists of the improvements to L-37 and L-33 borrow canals (renamed C-500A and C-500B, respectively) to enable excess flow.

The Central Lake Belt Storage Area will require the upgrade of the L-30 Borrow Canal and a revision of its purpose. Initially, the L-30 borrow canal would make dry-season deliveries to the South Dade Conveyance System via C&SF L-31N system located south of US-41 (Tamiami Trail). However, it will now be upgraded to convey regional natural system deliveries to the Northeast Shark River Slough while still maintaining its primary purpose in reducing seepage loss from WCA-3B area. As a result, the L-30 canal will be re-designated as the C-501 canal and C-503 canal or the Dade Broward Levee Canal will make deliveries to the South Dade Conveyance system.

Documents: None

FY2006 Status: This project has not started.

WCA-3A and 3B Flows to Central Lake Belt

Component: ZZ

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: The purpose of this project is to divert excess water above the target depths from WCA-3A/3B to the Central Lake Belt Storage Area or Shark River Slough (on an interim basis) via C-500A and C-500B canals (improved L-37 and L-33 borrow canals, respectively). Excess water will be diverted via modified structures at S-9 and S-31.

Documents: None

FY2006 Status: This project has not started.

WCA 3 Decompartmentalization and Sheetflow Enhancement – Part 1

Component: QQ Part 1 and SS Part 2

Authorization: WRDA 2000.

Local Sponsor: South Florida Water Management District.

Description: Part 1 of the Water Conservation Area 3 Decompartmentalization and Sheetflow Enhancement Project includes the modification or removal of levees, canals, and water control structures in WCA-3A and WCA-3B located in western Broward County.

This project includes backfilling the Miami Canal in WCA-3 from one to two miles south of the S-8 pump station down to the East Coast Protective Levee. To make up for the loss of water supply conveyance to the Lower East Coast urban areas from the Miami Canal, the capacity of the North New River Canal within WCA-3A will be doubled to convey water supply deliveries to Miami-Dade County as necessary. Modifications will also be made to the eastern section of Tamiami Trail which includes elevating the roadway through the installation of a series of bridges between L-31N Levee and the L-67 Levees. The eastern portion of L-29 Levee and Canal will also be degraded in the same area as the Tamiami Trail modifications.

The purpose of this project is to restore sheetflow and reduce unnatural discontinuities in the Everglades landscape. The project includes raising

and bridging portions of Tamiami Trail and filling in portions of the Miami Canal within WCA-3. Due to the dependencies of components, this project would be implemented with the Water Preserve Areas Project that would create a bypass for water supply deliveries to Miami Canal using the North New River Canal.

Documents: PMP March 2002 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_12_wca3_decom_p1.cfm.)

FY2006 Status: On Hold

WCA-3 Decompartmentalization and Sheetflow Enhancement – Part 2

Component: AA and QQ Part 2

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: Part 2 of the WCA-3 Decompartmentalization and Sheetflow Enhancement Project includes the modification or removal of levees, canals, and water control structures in WCA-3A located in western Broward County.

This project includes backfilling the southern 7.5 miles of L-67A Borrow Canal, removal of the L-68A, L-67C, the western portion of L-29 below WCA-3A, L-28, and L-28 Tieback Levees and Borrow Canals, and elevating the western portion of Tamiami Trail below WCA-3A.

Eight passive weir structures will be located along the entire length of L-67A to promote sheetflow from WCA-3A to WCA-3B during high flow conditions and additional water control structures will be added to the southern end of L-67A to allow for flow during extreme dry events. The purpose of these features is to re-establish the ecological and hydrological connection between WCA-3A and WCA-3B, the Everglades National Park, and Big Cypress National Preserve.

The compartmentalization of the WCAs has contributed to the loss of historic overland flows of the central Everglades slough system. This alteration of flows has resulted in temporal changes in hydropatterns and hydroperiods in the historic deepwater, central axis of the Shark River Slough system.

This component adds conveyance to WCA-3B to help re-establish natural hydroperiods and hydropatterns in the WCAs and Shark River Slough.

Documents: None

FY2006 Status: This project has not started.

Water Preserve Area Conveyance

Component: BB and XX P1

Authorization: Not Currently Authorized

Local Sponsor: South Florida Water Management District

Description: This project relates to two components: Dade Broward Levee and Canal and the turnpike deliveries associated with the North Lake Belt Storage

Area. A new conveyance canal will be constructed east of the Dade-Broward Levee Canal where the existing canal presently connects to the wellfield protection canal. In lieu of using the Florida Turnpike Canal, this new canal will convey regional water supply deliveries from Lake Okeechobee to the C-6, C-7, C-4, and C-2 canals and the South Dade Conveyance System. This feature will reduce seepage to the east from the Pennsuco wetlands and southern WCA-3B; enhance hydro periods in the Pennsuco Wetlands; provide recharge to the Miami-Dade County's Northwest Wellfield; and convey regional water supply deliveries south to Miami-Dade County.

Documents: None

FY2006 Status: This project has not started.

CERP Priority Projects – Not Sponsored Locally by the District

Henderson Creek/Belle Meade Restoration

Component: OPE

Authorization: Not Currently Authorized

Local Sponsor: Florida Department of Environmental Protection

Description: This region of Southwest Florida is currently facing a high urban growth rate. Changes in land use within the primary watersheds that drain into the Rookery Bay Estuary and adjacent waters have been identified in the Rookery Bay National Estuarine Research Reserve Management Plan as the highest priority resource issue that threatens the long-term preservation of Rookery Bay National Estuarine Research Reserve estuarine resources.

The coastal habitats in Collier County have been impacted by alterations of hydrology and habitat due to channelization of natural systems. Roads, canals, planned unit developments, commercial projects, and agriculture represent primary land uses within Rookery Bay National Estuarine Research Reserve watersheds. These alterations have greatly modified the volume, timing and quality of freshwater entering the fragile estuarine ecosystems. In addition, channelized flow in these watersheds has severely restricted the ability of the associated wetlands to filter pollutants.

The area known locally as Belle Meade is the primary drainage basin for the Henderson Creek Estuary and is currently targeted for acquisition by the FDEP. Historically, freshwater traveled across the surface of the land, percolating through wetland flow-ways before entering Henderson Creek. While channelization and development have disrupted this system, acquisition and restoration of the undeveloped lands surrounding Henderson Creek, which link the watershed and estuary, can stop further hydrologic and habitat disturbance. These estuarine areas provide critical nursery habitat for commercially and recreationally important finfish and shellfish. Land acquisition will assure long-term protection of the upland and wetland communities associated with these parcels.

Additionally, the proposed restoration efforts on the acquired lands will return a portion of the historic timing, duration and volume of freshwater inflow, thereby enhancing estuarine habitats.

Documents: None

FY2006 Status: A design agreement is pending to allow the return of a portion of the historic timing, duration, and volume of freshwater inflow to estuarine areas, and to assure long-term protection of the upland and associated wetland communities. The PMP was initiated in January, and discussions have proceeded between the FDEP, and the USACE regarding scope, alternatives, and the design agreement.

Lakes Park Restoration

Project Mission: Remove exotic species and create flow-way marsh

Project Benefits: Improve water quality conditions in this public park and downstream conditions in Hendry Creek, enhance overall watershed biodiversity and federal wildlife resources, remove or control non-native plants, and provide compatible recreation.

Component: Other Project Element

Authorization: WRDA 2000 Section 601(c)(3) – Additional Program Authority

Local Sponsor: Lee County

Description: Lakes Park is located east of Cape Coral in Lee County, just west of Highway 41. The park consists of an old rock mine with a series of borrow pit “lakes.” The entire area drains south into Hendry Creek, an Outstanding Florida Water, which flows for a few miles before entering Estero Bay.

Lee County has developed the area as a regional park with a bathing area along the shoreline of the lakes. Adjacent to the developed area, the remaining natural habitat contains pine flatwoods with some cypress heads. The pits capture runoff from the surrounding developed area (commercial, industrial, and residential). County monitoring has indicated a decline in water quality in the lakes. The lakes are infested with hydrilla and adjacent uplands and islands are covered with exotic plant species such as Australian pine and Brazilian pepper.

The project is expected to enhance surface water runoff quality by creating a meandering marsh flow way system with shallow littoral zones and removing aquatic and upland exotic vegetation. The littoral zone will be harvested periodically to remove excess nutrients from the system. Exotic vegetation will be removed and replaced with native vegetation on 11 acres of upland.

Documents: PMP July 2005 (The PMP – Final can be found online at http://www.evergladesplan.org/pm/pmp/pmp_94_lakespark.cfm.)

FY2006 Status: Lee County is the local sponsor for this project and is providing in-kind services including water quality data collection and real estate coordination. The Alternative Formulation Briefing is scheduled to be held in October. The Draft PIR is scheduled to be published in the Federal Register in September 2007.

Miccosukee Water Management Area

<u>Component:</u>	OPE
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	Miccosukee Tribe – Design Agreement pending
<u>Description:</u>	<p>The Miccosukee Water Management Area is a project to construct a managed wetland on the Miccosukee Tribe's Alligator Alley Reservation located in western Broward County. The purpose of the project is to provide water storage capacity and water quality enhancement for waters which discharge into the Everglades Protection Area.</p> <p>The project will convert approximately 900 acres of tribally owned cattle pastures into a wetland retention/detention area, which will be designed to filter out harmful nutrients contained in stormwater runoff before the water enters the Everglades Protection Area. Tribal Water Quality Standards dictate a numerical criterion of 10 parts per billion for total phosphorous inside the Everglades Protection Area. The Miccosukee Water Management Area was sized to treat the nutrient inputs of the Miccosukee Tribal lands.</p>
<u>Documents:</u>	None
<u>FY2006 Status:</u>	A Design Agreement is pending for this project.

Restoration of Pineland and Hardwood Hammocks in C-111 Basin

<u>Component:</u>	OPE
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	Miami-Dade County – Design Agreement pending
<u>Description:</u>	<p>The project is located in south Miami-Dade County, just east of Everglades National Park, along State Road 9336 in the area known as the Frog Pond. Eighty percent of the Frog Pond was used for agricultural purposes, and farmers rock plowed the cap rock to create soil for tomato farming. The Frog Pond has since been purchased by the SFWMD as part of the C-111 Project to restore the Taylor Slough portion of the Everglades. The project involves restoring South Florida slash pine and tropical hardwood hammock species on a 200-foot wide strip on each side of the two miles of State Road 9336 from the C-111 Canal to the L-31W Canal (approximately 50 acres). This project will demonstrate the techniques required to re-establish native conifer and tropical hardwood forests on land that has been rock plowed.</p>
<u>Documents:</u>	None
<u>FY2006 Status:</u>	Not currently authorized.

South Miami-Dade Reuse

<u>Component:</u>	BBB
<u>Authorization:</u>	Not Currently Authorized
<u>Local Sponsor:</u>	Miami-Dade County – Design Agreement pending

Description: This feature includes a plant expansion to produce superior, advanced treatment of wastewater from the existing South District Wastewater Treatment Plant located north of the C-1 Canal in Miami-Dade County.

The initial design of this feature assumed that the plant will have a capacity of 131 million gallons per day. More detailed analyses will be required to determine the quality and quantity of water needed to meet the ecological goals and objectives of Biscayne Bay. Additionally, due to the water quality issues associated with discharging reclaimed water into Biscayne National Park, an Outstanding Florida Water, such as potential failures of the treatment system and the limited ability to control contaminant inputs to the sanitary sewer system serving the treatment facility, other potential sources of water to provide required freshwater flows to southern and central Biscayne Bay should be investigated before pursuing the reuse facility as a source. If it is determined that other, more appropriate sources are not available, the reuse project will be initiated by determining the parameters of concern, the necessary wastewater treatment requirements, and the appropriate treatment technology to be implemented.

The purpose of this feature is to provide additional water supply to the South Biscayne Bay and Coastal Wetlands Enhancement Project. In order to attain the superior level of treatment, construction of an add-on pretreatment and membrane treatment system to the existing secondary treatment facility will be necessary. Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters (Biscayne Bay).

Documents: None

FY2006 Status: Not currently authorized.

West Miami-Dade Reuse

Component: HHH

Authorization: Not Currently Authorized.

Local Sponsor: Miami-Dade County – Design Agreement pending

Description: This feature includes a wastewater treatment plant expansion to produce superior, advanced treatment of wastewater from a future West Miami-Dade Wastewater Treatment Plant to be located in the Bird Drive basin in Miami-Dade County. The initial design assumed a potential discharge volume of 100 million gallons per day from the wastewater treatment plant.

The final configuration of these facilities will be determined through more detailed planning and design to be completed in the ongoing West Dade Water Reuse Feasibility Study authorized in Section 413 of the WRDA 1996. Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters.

The purpose of the feature is to meet the demands for (1) the Bird Drive Recharge Area; (2) the South Dade Conveyance System; and (3) the

Northeast Shark River Slough. When all demands have been met, the plant will stop treatment beyond secondary treatment standards and will dispose of the secondary treated effluent into deep injection wells.

This feature includes a wastewater treatment plant expansion to provide advanced treatment of wastewater from a future West Miami-Dade Wastewater Treatment Plant. The final configuration will be determined through detailed planning and design to be completed in the West Miami-Dade Reuse Feasibility Study, which was authorized in WRDA 1996.

Documents: None

FY2006 Status: This project is not currently authorized.

Winsberg Farms Wetlands Restoration

Project Mission: Construct 175 acres of wetlands and the related equipment to irrigate wetlands with reclaimed water.

Project Benefits: Create additional green space for urban enjoyment and habitat for wildlife and native plants; efficiently re-use reclaimed water; provide opportunities for public recreation; and connect with the already-established 50-acre Wakodahatchee wetland.

Component: OPE

Authorization: Not Currently Authorized.

Local Sponsor: Palm Beach County – Design Agreement of January 3, 2002

Description: In an effort to reduce the amount of treated water from the Southern Region Water Reclamation Facility that is currently wasted in deep injection wells, the Palm Beach County Water Utilities Department plans to further treat and recycle this water.

The Palm Beach County Water Utilities Department has completed construction of a 50-acre constructed wetland located at the county's System 3 site east of Jog Road, just southeast of the Winsberg property. This wetland has been named Wakodahatchee, which is Seminole Indian for "created waters." As part of this wetland, a public access facility with limited parking, boardwalk, kiosks, and interpretive signage was designed to educate the public about the importance of wetlands for both treatment of water and creation of wildlife habitat.

This project proposes construction of an additional 175 acres of wetlands on the Winsberg property. This will serve to not only recycle and preserve additional water for future use but also will link the Wakodahatchee and Winsberg Farms facilities and provide additional green space in area currently under heavy development.

Approximately, 6 to 8 million gallons per day of reclaimed water from the Southern Region Water Reclamation Facility would be applied to the area. The wetland would be planted to maximize the diversity of native plant material and habitat for various species of wildlife.

Documents: PMP May 2004 (The Final PMP can be found online at http://www.evergladesplan.org/pm/pmp/pmp_91_winsberg.cfm.)

FY2006 Status: The Draft PIR/NEPA Report was scheduled to be published in the Federal Register during FY2006. This report was delayed, however, as the county needs to surge water onto the site periodically, which affects embankment heights, the FDEP permit, and the Lake Worth Canal. The parties are working to establish that a 100-year storm event can be held at normal operating heights and to make surges the responsibility of the county.